

K-15

Touchscreen Panel PC Service Manual

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Notice

This is a preliminary version of the manual. Some illustrations may not match the actual product because the manual was sent for printing beforehand to come in time with the shipment.

How to Contact Us

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FCC and DOC Statement on Class B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio TV technician for help.

Notice:

1. The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. Shielded interface cables must be used in order to comply with the emission limits.

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Static Electricity Precautions

It is quite easy to inadvertently damage your PC, mainboard, components or devices even before installing them in your system unit. Static electrical discharge can damage computer components without causing any signs of physical damage. You must take extra care in handling them to ensure against electrostatic build-up.

1. To prevent electrostatic build-up, leave the device in its anti-static bag until you are ready to install it.
2. Wear an antistatic wrist strap.
3. Do all preparation work on a static-free surface.
4. Hold the device only by its edges. Be careful not to touch any of the components, contacts or connections.
5. Avoid touching the pins or contacts on all modules and connectors. Hold modules or connectors by their ends.



Warning:

Electrostatic discharge (ESD) can damage your processor, disk drive and other components. Perform the upgrade instruction procedures described at an ESD workstation only. If such a station is not available, you can provide some ESD protection by wearing an antistatic wrist strap and attaching it to a metal part of the system chassis. If a wrist strap is unavailable, establish and maintain contact with the system chassis throughout any procedures requiring ESD protection.

Safety Precautions

- The manufacturer assumes no liability for any damage, caused directly or indirectly, by improper installation of any components by unauthorized service personnel. Make sure operation on this PC is conducted by a certified engineer.
- Damage to system components and injury to yourself may result if power is applied during installation. Make sure all power cables are unplugged before opening the chassis cover.
- Read all operating instructions before using the PC.
- Keep operating instructions for future reference.
- Give special attention to all warnings specified in the manual.
- For continued protection against risk of electric shock and fire, use a three-wire grounding plug that will fit into a grounding-type power outlet. This is a safety measure. Do not defeat the safety purpose of the grounding-type plug.
- Tighten all screws to provide secure connections between devices and the PC.
- If an outdoor antenna or cable system is connected to the product, make sure the antenna or cable system is grounded to provide protection against voltage surges and built-up static charges.
- For added protection during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet, and disconnect the antenna or cable system. This will prevent damage caused by lightning and power line surges.
- An outside antenna system should not be located in the vicinity of overhead power lines or other light or power circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits, as contact with them may be fatal.

Unpacking the PC

Unpack the shipping carton and verify that the contents are all there and in good condition. Visually inspect the physical condition of the shipping carton. Exterior damage to the shipping carton may indicate that the contents of the carton are damaged. If any damage is found, do not remove the PC; contact the dealer where you purchased the PC for further instructions.

Package Checklist

The shipping carton contains the following items:

- ☒ KS150 Touchscreen Panel PC
- ☒ A user's manual
- ☒ One 2.5" HDD accessory kit
- ☒ One 34-pin floppy disk drive cable
- ☒ One IDE cable for ATA/33 or ATA/66 hard drive
- ☒ One CD

If any of these items are missing or damaged, please contact your dealer or sales representative for assistance.

Chapter I

Introduction

Overview
The Front View
The Rear View
Features

Chapter I - Introduction

I.1 Overview

This KS150 Touchscreen Panel PC, designed to deliver exceptional quality, is ideal for systems requiring impressive power at an affordable price. The modular nature of KS150 allows this all-in-one computer to be easily integrated into your kiosk or custom enclosure. The steel frame construction and quality workmanship ensure that the PC will last, even in the most demanding environments. KS150 is ideal for kiosks, gaming machines, point-of-sale terminals, point-of-information terminals, interactive systems and other Panel PC applications.

This user's manual provides information on the different components in this PC and instructions on how to use them. Some components or devices shown in this manual are optional and must be individually purchased to complete the PC.

1.2 The Front View



The LCD Display Module on the Front of KS150

1.3 The Rear View



The Computer Module on the Rear of KS150



The PCI Expansion Module on the Rear of KS150

I.4 Features

I.4.1 Specifications

Construction

- Steel frame construction with EMC approved

Processor

- VIA® C3 667MHz (133MHz FSB) EBGA onboard (800MHz optional)

Chipset

- VIA® VT8606 TwisterT and VT82C686B

System Memory

- 128MB SDRAM onboard (256MB optional)

Hard Disk Drive Bay

- 1 2.5" Hard Disk Drive (HDD) bay
- 1 Disk-On-Module (DOM) header or 1 40-pin IDE header on the DOM extension card

I/O Ports

- 4 USB ports
- 1 RJ45 10/100 Base-T fast ethernet LAN port
- 4 DB-9 serial ports (Touchscreen uses the COM 3 port)
- 1 DB-15 VGA port
- 1 DB-25 parallel port
- 1 mini-DIN-6 PS/2 mouse port
- 1 mini-DIN-6 PS/2 keyboard port
- 1 game/MIDI port
- 3 audio jacks: line-out, line-in and mic-in
- 1 power switch
- 1 LCD brightness control

I/O Connectors

- 1 44-pin IDE connector (90°)
- 1 Disk-On-Module (DOM) connector or
1 40-pin IDE header on the DOM extension card
- 1 floppy connector
- 1 ATX power supply connector
- 2 connectors for CPU and chassis fans

Onboard Graphics Features

- Integrated Savage4 2D/3D/Video accelerator
 - Optimized Shared Memory Architecture (SMA)
 - Full internal AGP 4x performance
 - High quality DVD video playback
 - Supports flat panel monitor
 - 2D/3D resolution up to 1920x1440 for high resolution CRT support
- 3D rendering features
 - 32-bit true color rendering
 - MPEG-2 video textures
- 2D hardware acceleration features
- Motion video architecture
- Extensive LCD support
 - Integrated 2-channel LVDS interface
 - Panel power sequencing
- Software drivers
 - Windows® 9x/NT4.0/2000/ME/XP

Onboard Audio Features

- 18-bit stereo full-duplex codec with independent variable sampling rate
- True stereo line level outputs

Onboard LAN Features

- Uses Realtek RTL8100 fast ethernet controller
- Integrated IEEE 802.3 10BASE-T and 100BASE-TX compatible PHY
- 32-bit PCI master interface
- Integrated power management functions

- Full duplex support at both 10 and 100 Mbps
- Supports IEEE 802.3u auto-negotiation

PCI IDE Interface

- Supports ATA/33 and ATA/66 hard drives
- PIO Mode 4 Enhanced IDE (data transfer rate up to 14MB/sec.)
- Bus mastering reduces CPU utilization during disk transfer
- Supports ATAPI CD-ROM, LS-120 and ZIP

Thermal Management

- 1 processor heatsink
- 1 chassis fan

Power Management

- Microsoft®/Intel® APM 1.2 compliant

System Management

- Watchdog timer
- Ease-of-use
- Hardware Monitor

Damage Free Intelligence

- Monitors CPU/system temperature
- Monitors 3.3V/5V/+12V/CPU voltages
- Monitors CPU/chassis fan speed
- Read back capability that displays temperature, voltage and fan speed

Watchdog Timer

The PC supports the Watchdog Timer function. It allows your application to regularly “clear” the system at the set time interval. If the system hangs or fails to function, it will reset at the set time interval so that your system will continue to operate.

BIOS

- Award BIOS, Windows® 95/98/2000/ME Plug and Play compatible
- Supports SCSI sequential boot-up
- Flash EPROM for easy BIOS upgrades
- Supports DMI 2.0 function

Compatibility

- Microsoft PC '98 compliant
- PCI 2.2 and AC '97 compliant

Bus Expansion

- 1 Special Expansion Slot for the optional PCI Expansion Module
 - The optional PCI Expansion Module is equipped with 2 PCI slots.

1.4.2 Touchscreen

Type 1: 5-Wire Analog Resistive

- Resolution: Continuous
- Light transmission: 75%
- Interface: RS-232
- Power consumption: +5V @ 200mA
- Durability: 30 million touches

Type 2: Capacitive

- Resolution: 1024 x 1024
- Light transmission: 85%
- Interface: RS-232
- Power consumption: +5V @ 100mA
- Durability: 20 million touches

Type 3: Surface Acoustic Wave

- Resolution: 4096 × 4096
- Light transmission: 91%
- Interface: RS-232
- Power consumption: +5V @ 150mA
- Durability: 50 million touches

I.4.3 LCD Display

Display Type

- TFT color LCD

Size (Diagonal)

- 15.1 inches (38.35 cm)

Maximum Resolution

- 1024 × 768 (XGA)

Color Depth

- 6-bit, 262, 144 colors

Luminance, White

- 250 cd/m²

Viewing Angles

- Left: 75°, Right: 75°
- Upper: 55°, Lower: 60°

Pixel pitch (mm)

- 0.300 × 0.300

Power Consumption

- 1.9 Watt Logic, 9.7 Watt CCFL

Display Operating Mode

- Transmissive mode

Surface Treatments

- Hard coat (3H), Anti-glare

Operating Temperature

- 0 - 50°C

VR Controls

- Brightness

LCD MTBF

- 30,000 hrs.

Backlight MTBF

- 25,000 hrs.

I.4.4 Power Supply

Output Rating

- 120W

Input

- 100-240 Vac, 50-60 Hz, 4/2 A

Output

- +3.3V/10A, +5V/14A, +12V/4.5A
- +5Vsb/2A, -5V/0.3A, -12V/0.8A

MTBF

- 50,000 hrs.

EMI/EMS

- Meets FCC class B and CE

Safety

- Meets UL and CSA

1.4.5 Environmental

Operating Temperature

- 0° to 45°C, 10 to 90% RH

Storage Temperature

- -20° to 75°C, 10 to 95% RH

EMI/EMS

- Meets FCC class B and CE

Safety

- Meets UL, CSA and CE

1.4.6 Dimensions

PCB Mainboard Dimensions

- 6 layers
- 29cm (11.4") x 24cm (9.45")

Computer Module (KSB-150)

- 39.5 x 25.5 x 4.5 cm (15.55" x 10.04" x 1.77")

LCD Display Module (KSL-151)

- 42.2 x 31.8 x 4.3 cm (16.61" x 12.52" x 1.69")

Chapter 2

Getting Started

Preparing the Panel PC
Connecting the Power Cord
Configuring the BIOS
Installing the Operating System
Installing the Drivers

Chapter 2 - Getting Started

2.1 Preparing the Panel PC

Before you start using the Panel PC, you need the following items:

- Power cord
- PS/2 keyboard
- PS/2 mouse
- CD-ROM drive (for installing software/drivers)
- Phillips screwdriver

2.2 Connecting the Power Cord

A power cord is provided with the Panel PC. Follow the steps below to connect the power cord.

1. Connect the female end of the power cord to the AC-in connector located at the bottom of the Panel PC.



2. Connect the other end, 3-pin male plug, to an electrical wall outlet or surge protector.

3. Power up the PC by pressing the power switch, located at the rear side, to ON.



Rear View



Bottom View

2.3 Configuring the BIOS

To get you started, you may need to change configurations such as the date, time or type of hard disk drive

1. Power up the PC.
2. When the boot-up screen appears, press the key to enter the Award BIOS Setup Utility.
3. Refer to chapter 6 for more information.

2.4 Installing the Operating System

Depending on how the operating system software is provided, you may need to connect an external floppy disk drive and/or CD-ROM drive to install the operating system. Make sure a 2.5" hard disk drive is already installed in the PC.

1. Refer to chapter 3 for instructions on installing a floppy disk drive, CD-ROM drive and hard disk drive.
2. Refer to your operating system manual for instructions on installing the operating system.

2.5 Installing the Drivers

A CD is provided with the PC. The CD ("System Utility CD") includes drivers that must be installed onto the PC to provide the best system performance. Refer to chapter 9 for instructions on installing the drivers.

Chapter 3

Computer Module - Connecting Devices

Removing the Rear Panel Cover

The Internal Component of the Computer Module

Connecting USB Devices

Connecting a Network Device

Connecting Serial Devices

Connecting a Parallel Device

Connecting a Monitor

Connecting a PS/2 Keyboard and PS/2 Mouse

Connecting a Game Device

Connecting Audio Devices

Connecting a Floppy Disk Drive

Connecting a CD-ROM Drive

Installing a 2.5" Hard Disk Drive

Installing Disk-On-Module

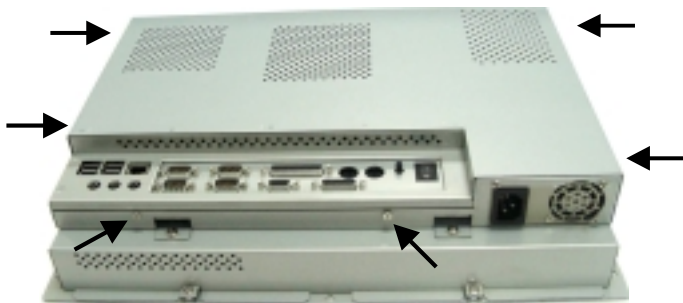
Chapter 3 - Computer Module - Connecting Devices

Most devices will be connected to the I/O ports that are located at the rear side of the PC. These ports are readily accessible that you do not need to remove the cover. However, if you need to connect a floppy disk drive or CD-ROM drive when installing an operating system or drivers, you must remove the rear panel cover in order to access the floppy disk drive connector and IDE connector:

3.1 Removing the Rear Panel Cover

The following steps are standard procedures for removing the rear panel cover:

1. Make sure the PC and all other peripheral devices connected to it has been powered-off.
2. Disconnect all power cords and cables.
3. Place the Panel PC on a flat surface with the rear side facing up.
4. The screws around the rear panel cover are used to secure the cover to the chassis. Remove these screws and put them in a safe place for later use.



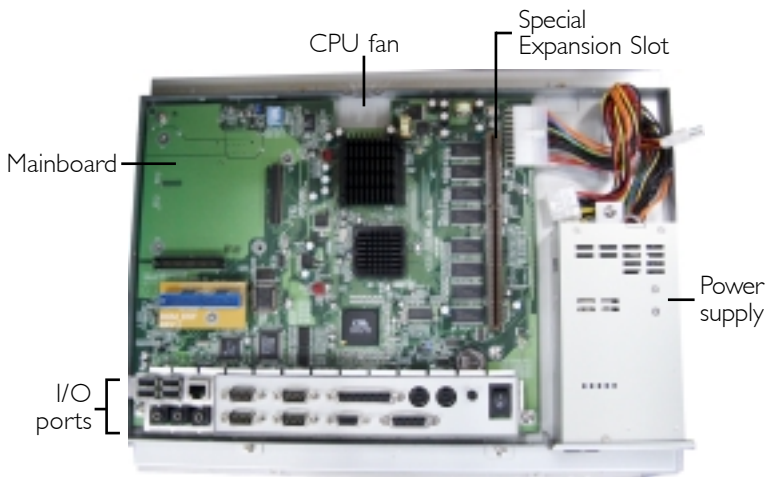
KSI50

5. You may now lift the cover.



3.2 The Internal Component of the Computer Module

The interior of the PC comprises the mainboard, power supply, CPU fan and other parts that complete the system.



Refer to chapter 10 for the detailed illustration of the mainboard layout.

3.3 Connecting USB Devices

The PC is equipped with 4 USB ports. USB allows data exchange between your computer and a wide range of simultaneously accessible external Plug and Play peripherals.

1. The USB ports support hot plugging therefore you do not need to power down the PC whenever you connect a USB device. Connect the interface cable connector of the USB device to an available USB port.

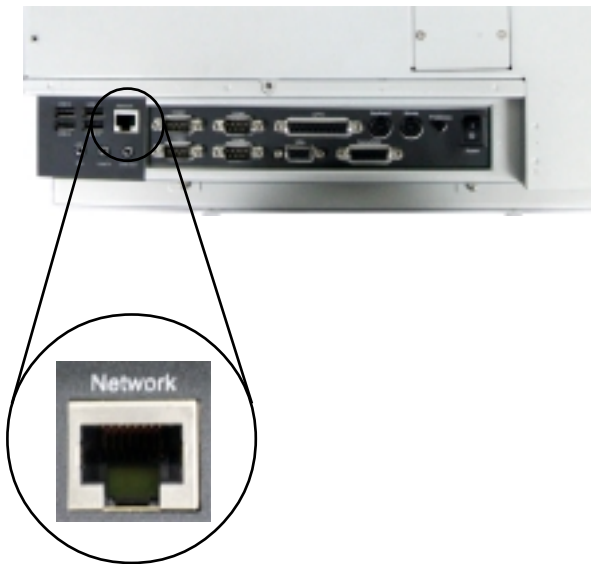


2. After connecting a USB device, you may need to install drivers to use the device. Refer to the manual or documentation that came with the device for additional information on using the device.
3. Run the Award BIOS Setup Utility to configure the USB ports. Refer to chapter 7 for more information.

3.4 Connecting a Network Device

The RJ45 fast-ethernet port allows the PC to connect to a local area network by means of a network hub.

1. Make sure the PC and all other peripheral devices connected to it has been powered down.
2. Connect the interface cable connector of the network device to the RJ45 LAN port



3. Power up the PC and the network device.
4. You must have the proper drivers installed in your operating system to use the network device. Refer to the manual or documentation that came with the device for additional information on using the device.
5. Install the RTL8100 LAN Driver. Refer to chapter 9 for more information.

3.5 Connecting Serial Devices

The PC is equipped with 4 serial ports. The built-in serial ports are RS-232C asynchronous communication ports with 16C550A-compatible UARTs that can be used with modems, serial printers, remote display terminals, and other serial devices.

1. Make sure the PC and all other peripheral devices connected to it has been powered down.
2. Connect the interface cable connector of the serial device to an available serial port and tighten the screws on each side of the connector:



Important:

If the LCD Display Module supports touchscreen, DO NOT connect a serial device to the COM 3 serial port because the touchscreen is internally connected to COM 3. If under certain circumstance, you need to use COM 3, please refer to chapter 4 for instructions on disabling the touchscreen.

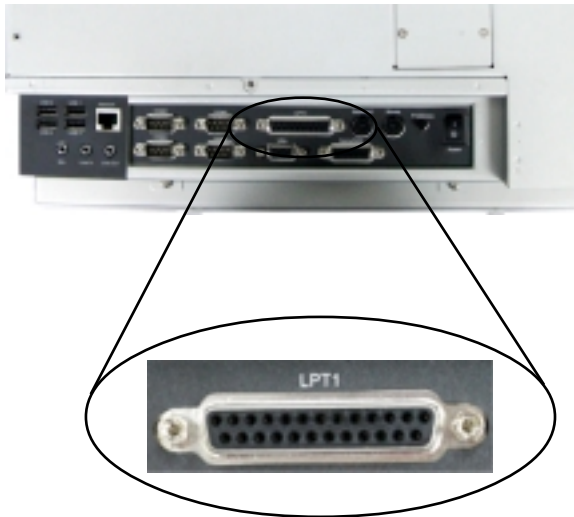


3. Power up the PC and the serial device.
4. You must have the proper drivers installed in your operating system to use the serial device. Refer to the manual or documentation that came with the device for additional information on using the device.
5. Run the Award BIOS Setup Utility to select the I/O address and IRQ of the serial port. Refer to chapter 7 for more information.

3.6 Connecting a Parallel Device

The parallel port at the rear side of the Panel PC is used for interfacing the PC to a parallel printer. It supports Normal, ECP and EPP modes.

1. Make sure the PC and all other peripheral devices connected to it has been powered down.
2. Connect the interface cable connector of the parallel device to the parallel port and tighten the screws on each side of the connector:

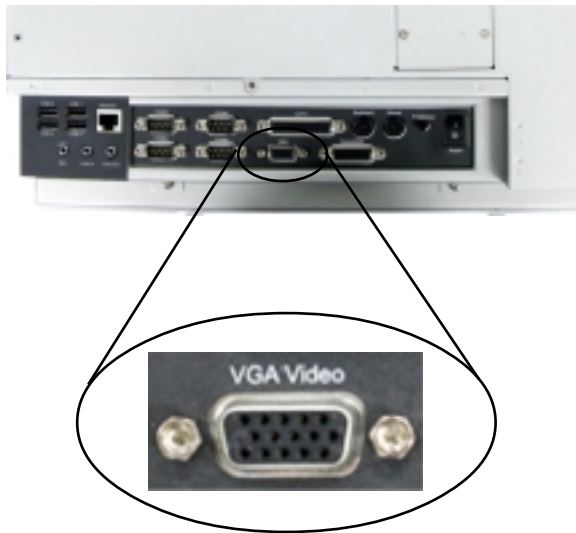


3. Power up the PC and the parallel device.
4. You must have the proper drivers installed in your operating system to use the parallel device. Refer to the manual or documentation that came with the device for additional information on using the device.
5. Run the Award BIOS Setup Utility to configure the parallel port. Refer to chapter 7 for more information.

3.7 Connecting a Monitor

The PC allows simultaneous use of an analog monitor and the LCD display.

1. Make sure the PC and all other peripheral devices connected to it has been powered down.
2. Connect the interface cable connector of the monitor to the VGA port and tighten the screws on each side of the connector:

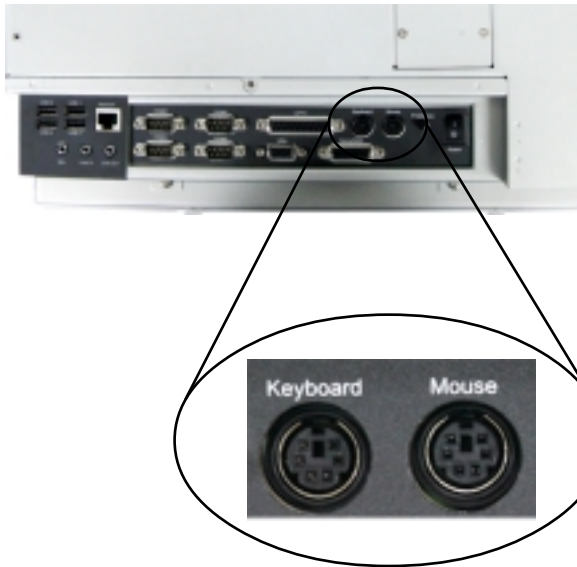


3. Power up the PC and the monitor:
4. Refer to the manual or documentation that came with the monitor for additional information on using the monitor:
5. Install the S3 VGA Driver. Refer to chapter 9 for more information.

3.8 Connecting a PS/2 Keyboard and PS/2 Mouse

The PS/2 keyboard and PS/2 mouse ports are used for connecting a PS/2 keyboard and a PS/2 mouse.

1. Make sure the PC and all other peripheral devices connected to it has been powered down.
2. Connect the interface cable connector of the PS/2 keyboard and PS/2 mouse to their corresponding ports.

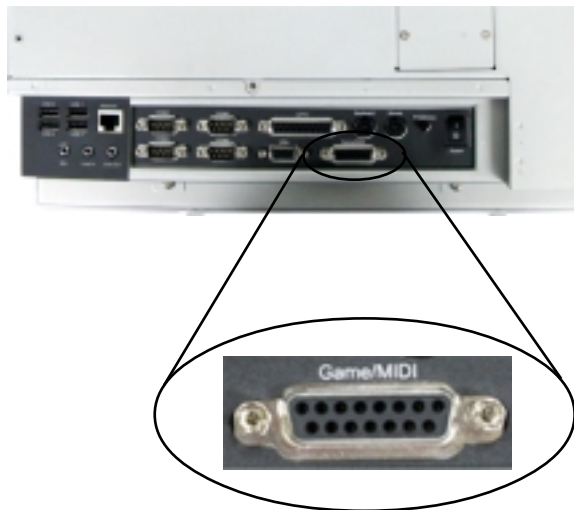


3. Power up the PC.
4. You may need to install drivers to use the devices. Refer to the manual or documentation that came with the devices for additional information.

3.9 Connecting a Game Device

The Game/MIDI port is identical to that of a standard PC game adapter or game I/O port. This port works well with any application that is compatible with the standard PC joystick.

1. Make sure the PC and all other peripheral devices connected to it has been powered down.
2. Connect the interface cable connector of the game device to the game port and tighten the screws on each side of the connector:

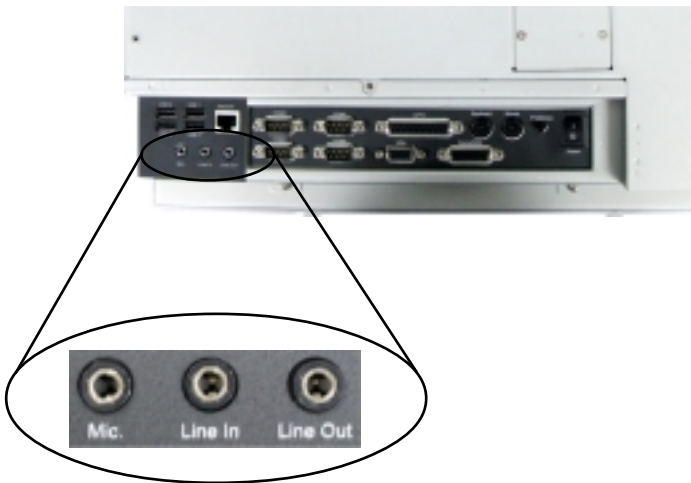


3. Power up the PC and the game device, if necessary.
4. You must have the proper drivers installed in your operating system to use the game device. Refer to the manual or documentation that came with the device for additional information on using the device.
5. Run the Award BIOS Setup Utility to configure the game port. Refer to chapter 7 for more information.

3.10 Connecting Audio Devices

The PC is equipped with 3 audio jacks. The line-out jack is used to connect external speakers for audio output from the PC. The line-in jack is used to connect external audio devices such as CD player, AM/FM radio tuner, synthesizer, etc. for audio input to the PC. The mic-in jack is used to connect a microphone for recording voice and sound.

1. Make sure the PC and all other peripheral devices connected to it has been powered down.
2. Connect the interface cable connector of the audio device to the appropriate audio jack.

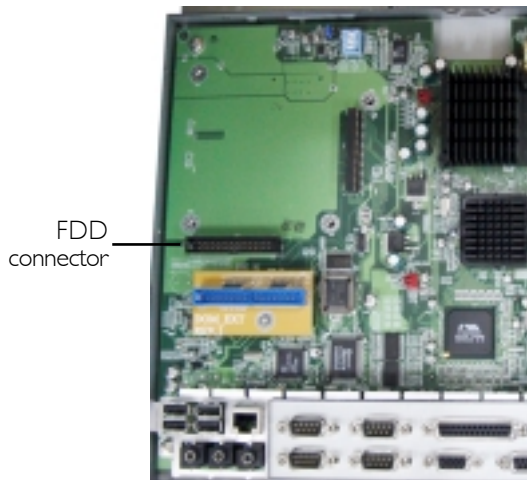


3. Power up the PC and the audio device.
4. Refer to the manual or documentation that came with the audio device for additional information on using the device.

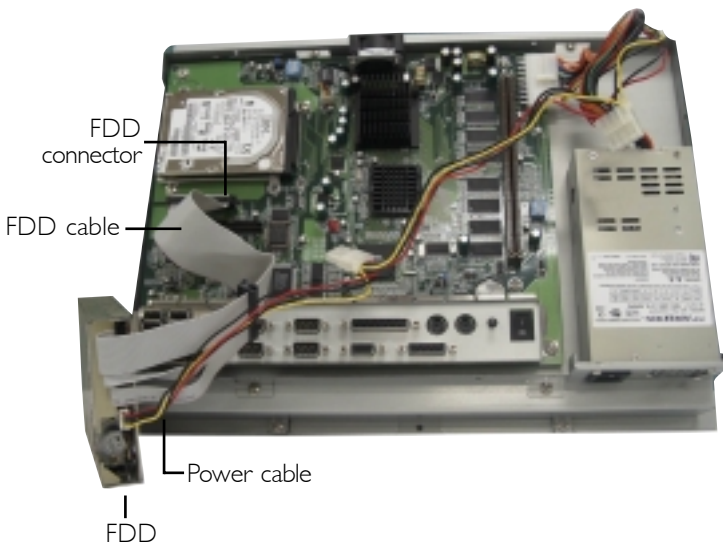
3.1.1 Connecting a Floppy Disk Drive

The floppy disk drive header on the mainboard supports two standard floppy disk drives. You may need to connect an external floppy disk drive when installing certain operating systems or drivers.

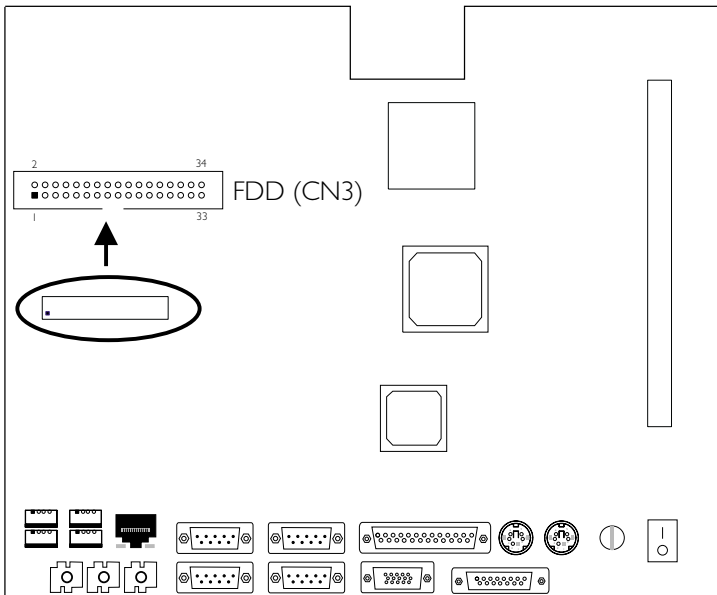
1. Make sure the PC and all other peripheral devices connected to it has been powered down.
2. Disconnect all power cords and cables.
3. Follow the steps in section 3.1 for instructions on removing the rear panel cover: The floppy disk drive header is readily accessible after removing the cover.



4. Connect the connector on one end of the floppy disk drive cable into the floppy disk drive header (CN3) on the mainboard. To prevent improper floppy cable connection, the floppy disk drive header has a keying mechanism. The connector on the floppy cable can be inserted into the header only if pin 1 of the connector is aligned with pin 1 of the header. The colored edge of the ribbon cable is usually pin 1.
5. Connect the other connector(s) on the floppy disk drive cable into the 34-pin connector that is on the rear side of the floppy disk drive(s). Align the colored edge of the daisy chained ribbon cable with pin 1 of the drive's connector. If you connected two floppy disk drives, the end-most connector should be attached to the drive you want to designate as Drive A.



6. Connect the power cable connector from the power supply to the power connector located at the rear side of the floppy disk drive.
7. Refer to the manual or documentation that came with the floppy disk drive for additional information on using the drive.
8. Power up the PC.
9. Make sure the FDD controller in the Award BIOS Setup Utility is set to enabled. Refer to chapter 7 for more information.
10. After you're done using the floppy disk drive, power down the PC.
11. Disconnect the floppy drive from the PC and replace the rear panel cover:

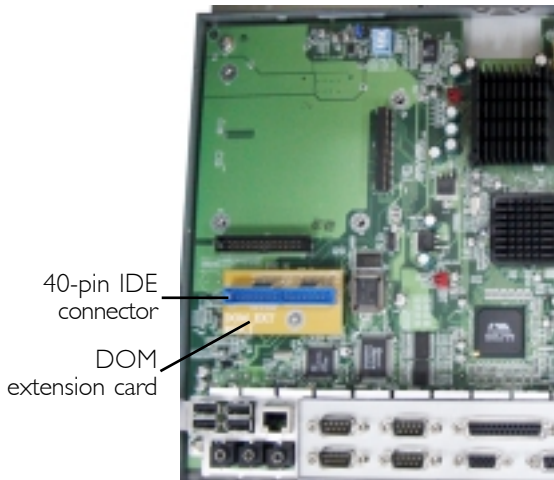


Location of the Floppy Disk Drive Connector on the Mainboard

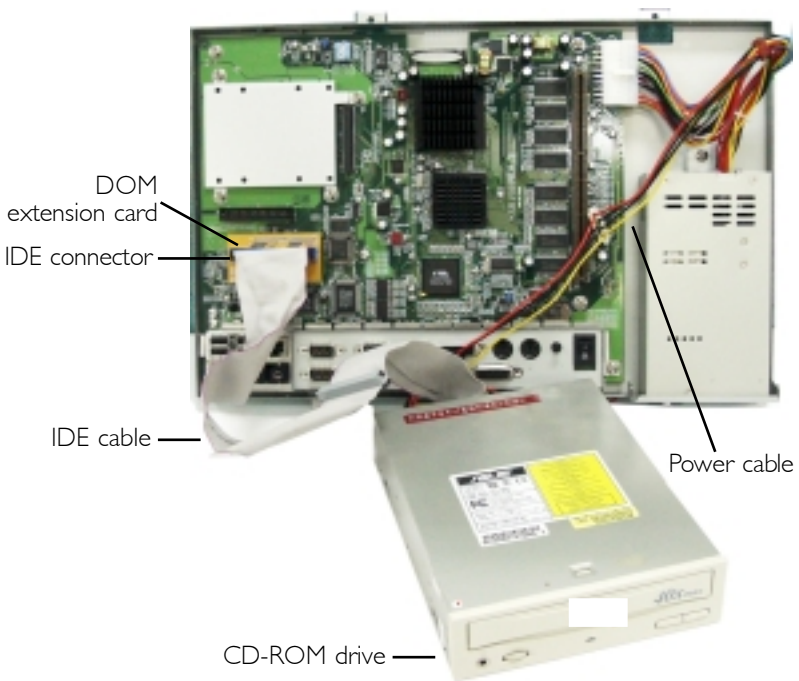
3.12 Connecting a CD-ROM Drive

You may need to connect an external CD-ROM drive when installing certain operating systems or drivers.

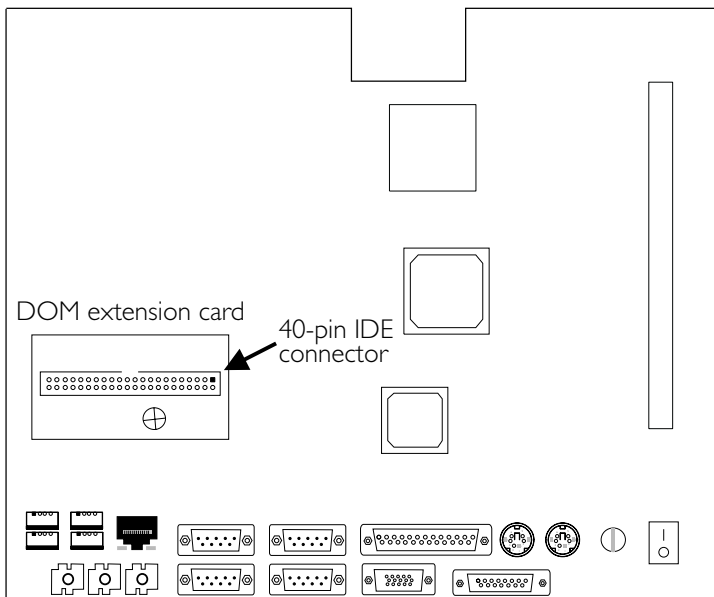
1. Make sure the PC and all other peripheral devices connected to it has been powered down.
2. Disconnect all power cords and cables.
3. Follow the steps in section 3.1 for instructions on removing the rear panel cover. Use the 40-pin IDE connector that is located on the DOM extension card to interface the CD-ROM drive. The connector is readily accessible after removing the cover:



4. Connect the connector on one end of the 40-pin IDE cable into the IDE connector that is located on the DOM extension card. To prevent improper cable connection, the IDE connector has a keying mechanism. The connector on the cable can be inserted into the IDE connector only if pin 1 of the connector is aligned with pin 1 of the IDE connector. The colored edge of the ribbon cable is usually pin 1.
5. Connect another connector that is on the IDE cable into the 40-pin connector that is at the rear side of the CD-ROM drive. Align the colored edge of the daisy chained ribbon cable with pin 1 of the drive's connector.



6. Connect the power cable connector from the power supply to the power connector located at the rear side of the CD-ROM drive.
7. Refer to the manual or documentation that came with the CD-ROM drive for additional information on using the drive.
8. Power up the PC.
9. Make sure IDE channel 1 in the Award BIOS Setup Utility is set to enabled. Refer to chapter 7 for more information.
10. After you're done using the CD-ROM drive, power down the PC.
11. Disconnect the CD-ROM drive from the PC and replace the rear panel cover.

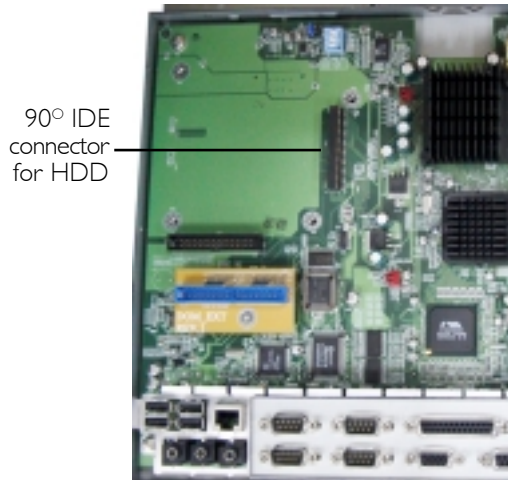


Location of the IDE Connector on the DOM Extension Card

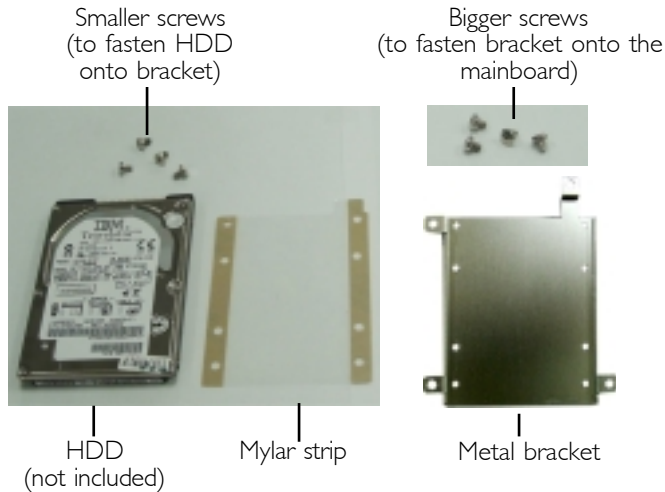
3.13 Installing a 2.5" Hard Disk Drive

The PC is equipped with a 2.5" HDD drive bay for installing a 2.5" hard disk drive.

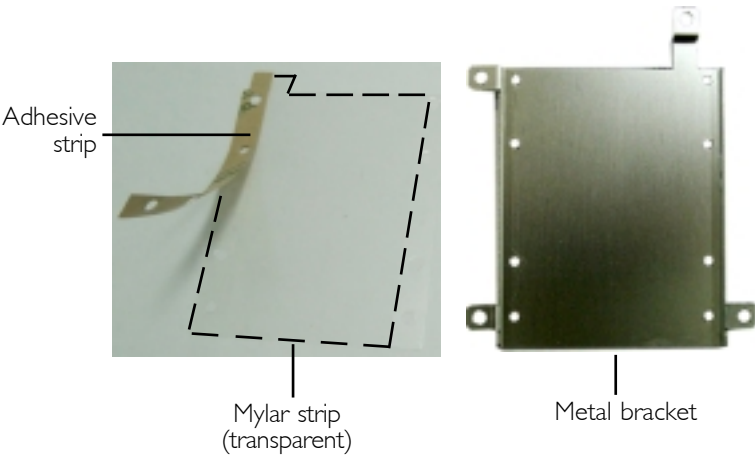
1. Make sure the PC and all other peripheral devices connected to it has been powered down.
2. Disconnect all power cords and cables.
3. Follow the steps in section 3.1 for instructions on removing the rear panel cover. The 90° IDE connector for interfacing a 2.5" hard disk drive is readily accessible after removing the cover:



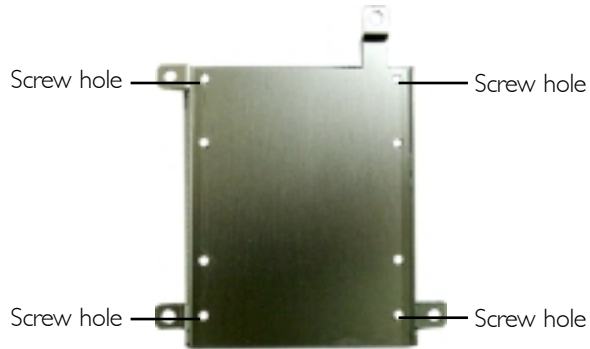
4. The PC package includes a 2.5" HDD accessory kit. The kit contains a metal bracket, 8 screws and a Mylar strip.



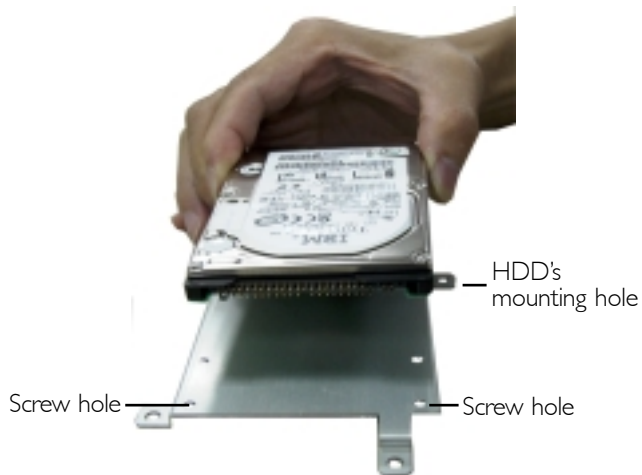
- 4a. Peel off adhesive strips from both sides of the Mylar strip and stick the Mylar strip onto the metal bracket.



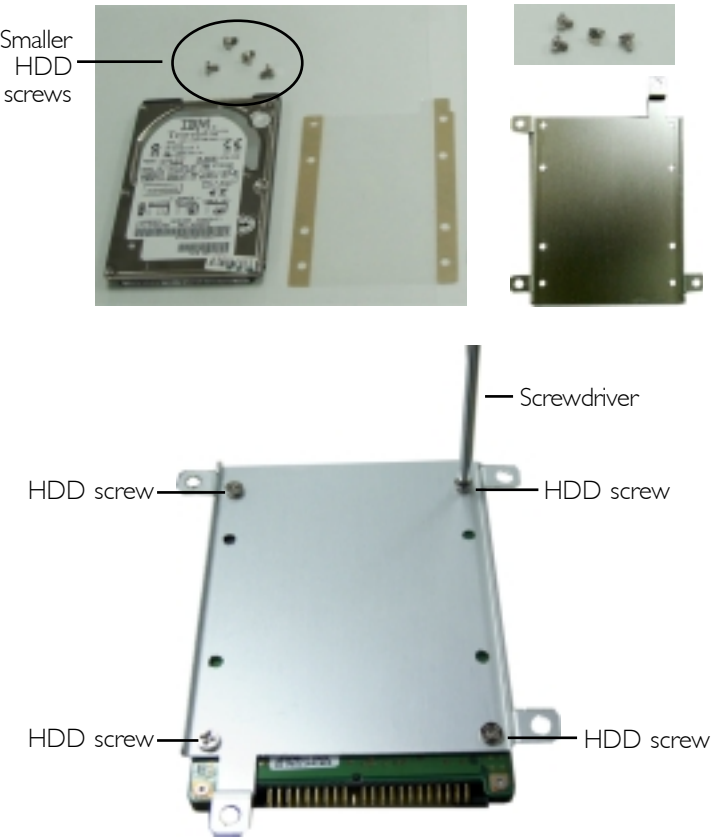
- 4b. Align the HDD's mounting holes with the screw holes on the metal bracket.



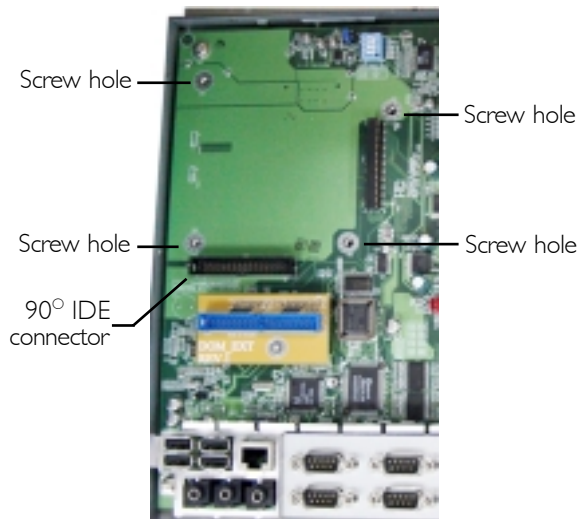
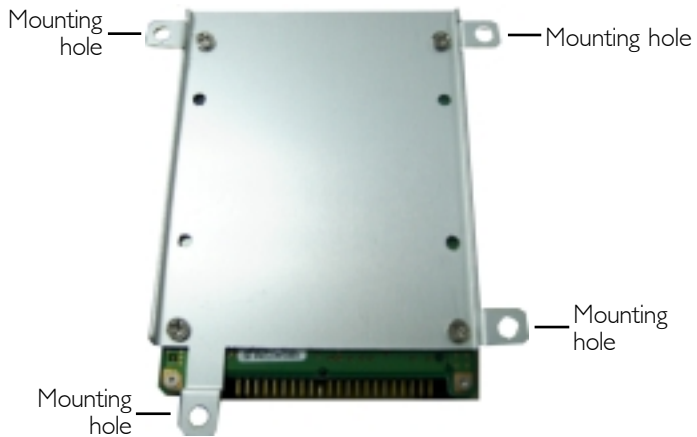
Locations of the screw holes on the metal bracket



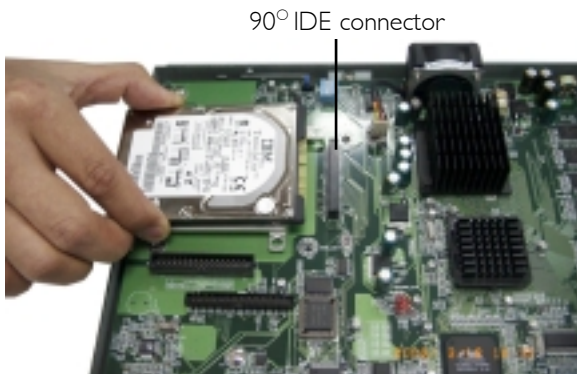
4c. Using the 4 smaller screws, secure the HDD onto the metal bracket.



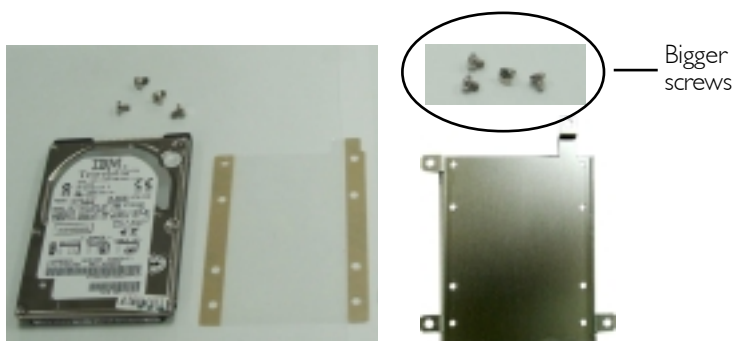
5. Now align the mounting holes of the metal bracket with the screw holes on the mainboard.

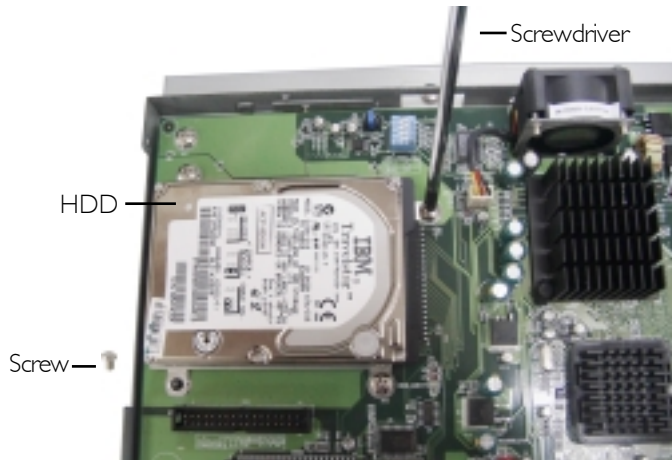


6. Align the HDD's connector to the IDE connector (CN2) on the mainboard then slide the HDD in making sure it is secured in place.

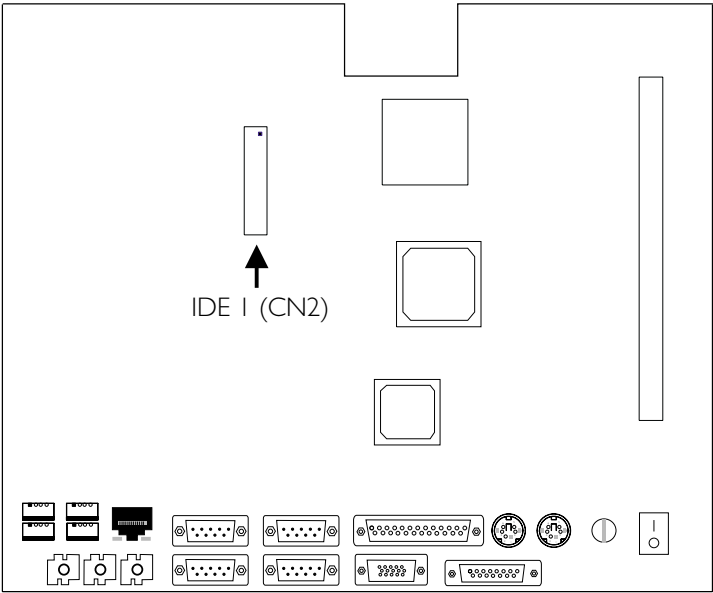


7. Use the 4 bigger screws to secure the HDD to the mainboard.





8. Refer to the manual or documentation that came with the hard disk drive for additional information on using the drive.
9. Power up the PC.
10. Make sure IDE channel 0 in the Award BIOS Setup Utility is set to enabled. Refer to chapter 7 for more information.
11. Replace the rear panel cover:

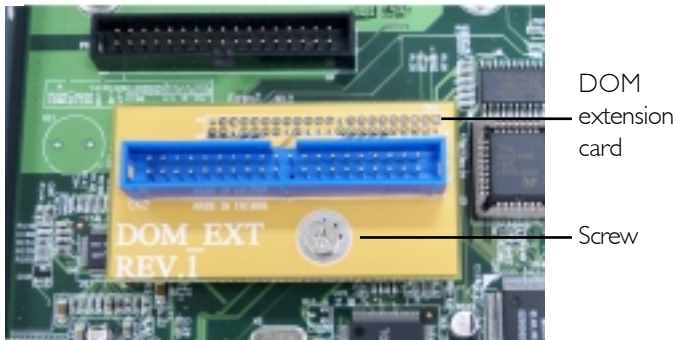


Location of the Hard Disk Drive Connector on the Mainboard

3.14 Installing Disk-On-Module (DOM)

The PC is equipped with a Disk-On-Module connector. Disk-On-Module is a storage device that allows you to store data just like a hard disk drive.

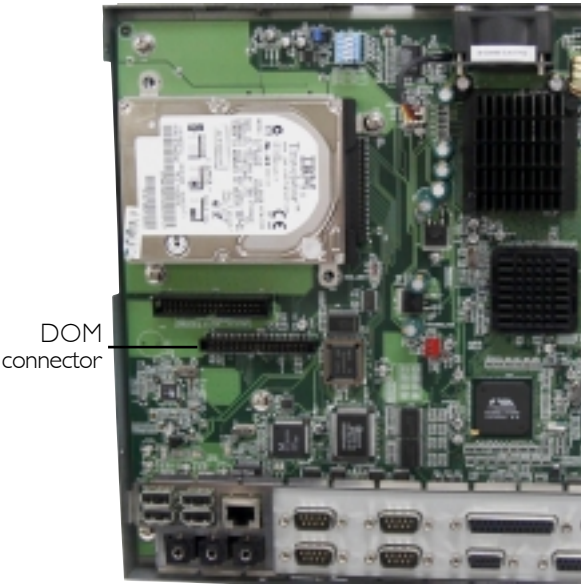
1. Make sure the PC and all other peripheral devices connected to it has been powered down.
2. Disconnect all power cords and cables.
3. Follow the steps in section 3.1 for instructions on removing the rear panel cover.
4. You must first remove the DOM extension card in order to access the Disk-On-Module connector. Remove the screw that secures the DOM extension card.



5. After removing the screw, remove the DOM extension card and the stud.



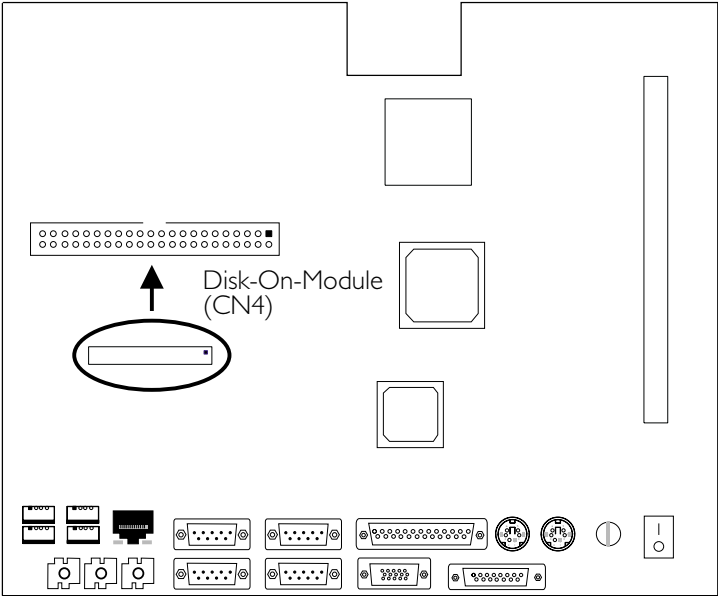
6. The Disk-On-Module connector is now accessible.



7. Align the module's connector (located on the solder side of the module) with the DOM connector (CN4) on the mainboard then gently insert the module into the connector. Make sure it is firmly seated in place.



8. Replace the rear panel cover.
9. Power up the PC.
10. Make sure IDE channel 1 in the Award BIOS Setup Utility is set to enabled. Refer to chapter 7 for more information.



Location of the Disk-On-Module Connector on the Mainboard

Chapter 4

LCD Display Module

Touchscreens

LCD Brightness Control

LCD Voltage

Connecting the LCD Display Module to the Computer Module

Disabling the Touchscreen Function

Chapter 4 - LCD Display Module

4.1 Touchscreens

The LCD Display Module may come with an Elo touchscreen or 3M MicroTouch touchscreen.

The solid-glass touchscreen from Elo has a scratch-resistant glass surface that delivers superior image clarity, resolution and light transmission. Its IntelliTouch Surface Acoustic Wave (SAW) technology responds accurately to the lightest touch and the new sealing capability enhances durability offering increased protection from dust and other external contaminants.

The 3M MicroTouch touchscreen delivers superior optical clarity that supports the analog capacitive and 5-Wire analog resistive technologies.

Refer to chapter 1 for specifications of these supported touchscreens.

To use the touchscreen, you need to install the appropriate drivers. Drivers for various operating systems are in the provided CD. Refer to chapter 9 for information on installing the drivers.



Important:

If the LCD Display Module supports touchscreen, DO NOT connect a serial device to the COM 3 serial port because the touchscreen is internally connected to COM 3. If under certain circumstance, you need to use COM 3, please refer to section 4.5 to disable the touchscreen.

4.2 LCD Brightness Control

The LCD Brightness Control at the rear side of the Panel PC allows you to adjust the brightness of the LCD display panel.



4.3 LCD Voltage

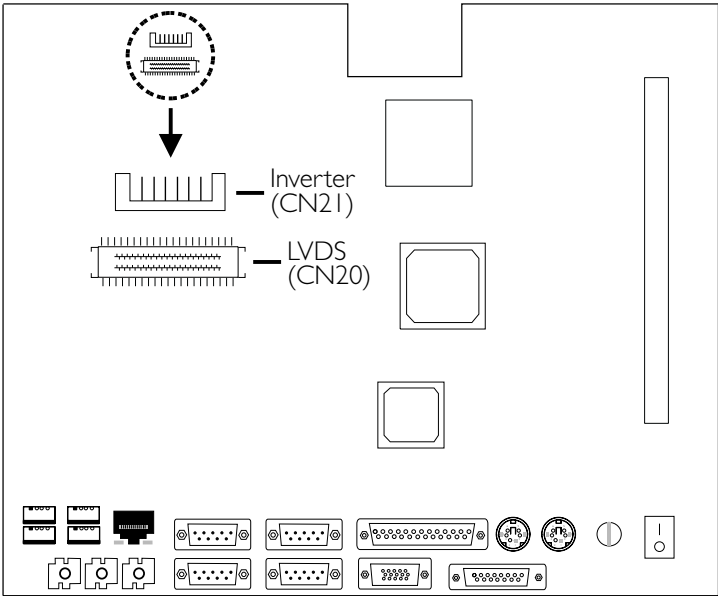
Jumper JP9 on the mainboard is used to select the voltage of the LCD.

Voltage	Pins
5V	1-2
3.3V	3-4
1.2V	5-6

Refer to chapter 5 for the location of the jumper on the mainboard and illustrations on the jumper settings.

4.4 Connecting the LCD Display Module to the Computer Module

The LCD Display Module is connected to the Computer Module by means of 2 connectors that are located on the solder side of the Computer Module's mainboard. These connectors (LVDS connector and Inverter connector) transmit power and video signals from the Computer Module to the LCD Display Module.



CN20 and CN21 are Located on the Solder Side of the Computer Module's Mainboard

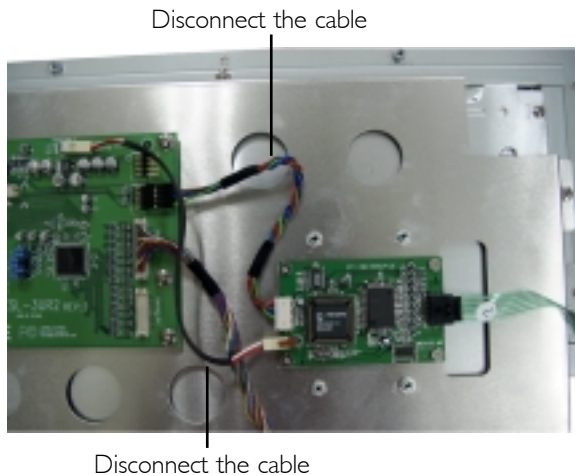
4.5 Disabling the Touchscreen Function

4.5.1 Analog Resistive Touchscreen

Detach the Computer Module from the LCD Display Module by removing screws that secure these modules together. After detaching them, the rear side of the LCD Display Module would appear as shown below.



Disconnect the 2 cables shown below. Disconnecting these cables will disable the Touchscreen function.



KSI50

After disconnecting the cables, the rear of the LCD Display Module would appear as shown below. You may now attached the Computer Module back.

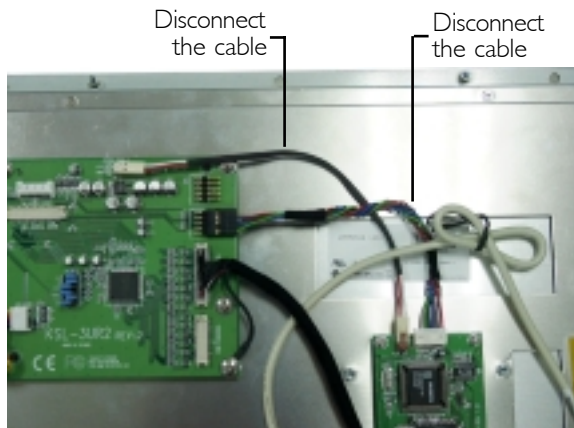


4.5.2 Capacitive Touchscreen

Detach the Computer Module from the LCD Display Module by removing screws that secure these modules together. After detaching them, the rear side of the LCD Display Module would appear as shown below.



Disconnect the 2 cables shown below. Disconnecting these cables will disable the Touchscreen function.



KSI50

After disconnecting the cables, the rear of the LCD Display Module would appear as shown below. You may now attached the Computer Module back.



4.5.3 Surface Acoustic Wave Touchscreen

Detach the Computer Module from the LCD Display Module by removing screws that secure these modules together. After detaching them, the rear side of the LCD Display Module would appear as shown below.



Disconnect the 2 cables shown below. Disconnecting these cables will disable the Touchscreen function.



Disconnect
the cable

Disconnect
the cable

KSI50

After disconnecting the cables, the rear of the LCD Display Module would appear as shown below. You may now attach the Computer Module back.



Chapter 5

PCI Expansion Module

Introduction

Installing the PCI Riser Card

Installing the PCI Expansion Module

Chapter 5 - PCI Expansion Module

5.1 Introduction

The Computer Module's mainboard is equipped with a Special Extension Slot for the optional PCI Expansion Module. The optional PCI Expansion Module allows you to install a PCI riser card. The PCI riser card is equipped with 2 PCI slots for inserting 2 PCI add-on boards.



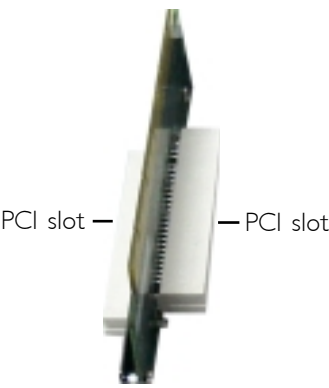
Top View of the PCI Expansion Module



Bottom View of the PCI Expansion Module



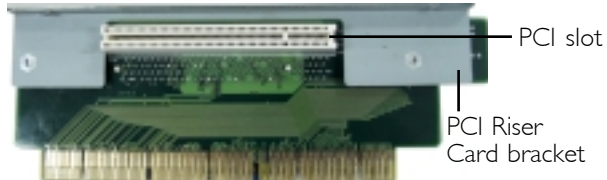
PCI Riser Card Bracket



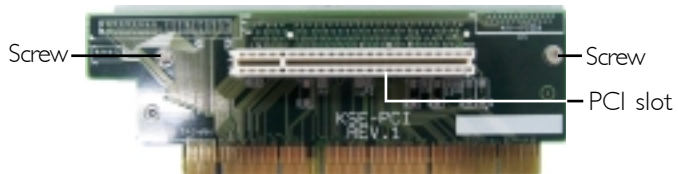
PCI Riser Card

5.2 Installing the PCI Riser Card

1. Align the PCI Riser Card Bracket to the solder side of the PCI Riser Card.



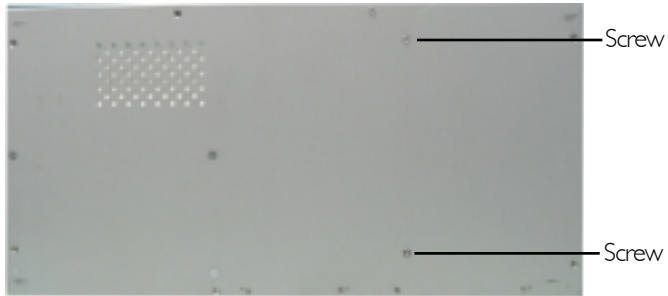
2. Screw from the component side of the PCI Riser Card to secure them together.



3. Position the PCI Riser Card onto the PCI Expansion Module as shown below.



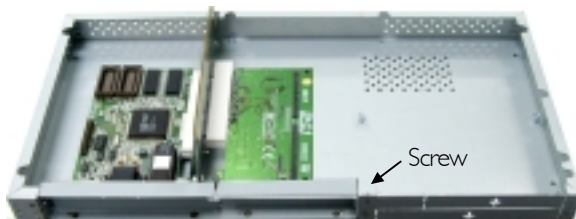
4. Screw from the other side of the PCI Expansion Module to secure the PCI Riser Card in place.



5. You may now insert a PCI add-on board into the PCI slot. Secure the card-edge bracket of the add-on board with a screw.



6. Now insert another PCI add-on board into the other PCI slot. Secure the card-edge bracket of the add-on board with a screw.

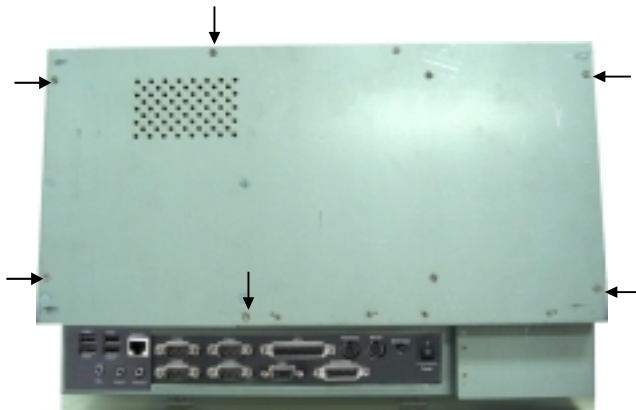


5.3 Installing the PCI Expansion Module

1. Place the 6 studs as indicated by the arrows below into the screw holes of the computer module.



2. Place the PCI Expansion Module on top making sure the screw holes of the PCI Expansion Module align with the studs.
3. Secure the PCI Expansion Module by placing screws into the studs.



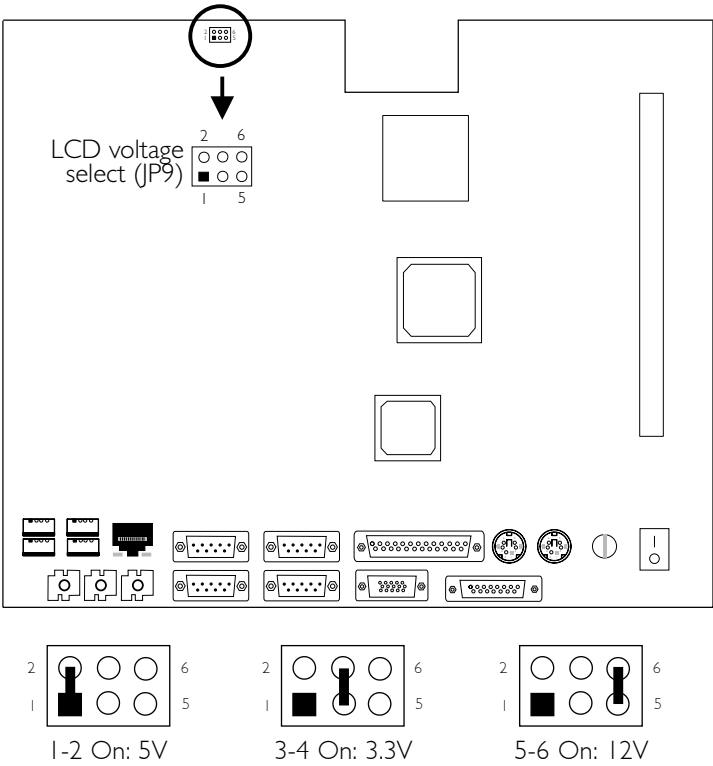
Chapter 6

Jumper Settings

Selecting the LCD Voltage
Clearing the CMOS Data

Chapter 6 - Jumper Settings

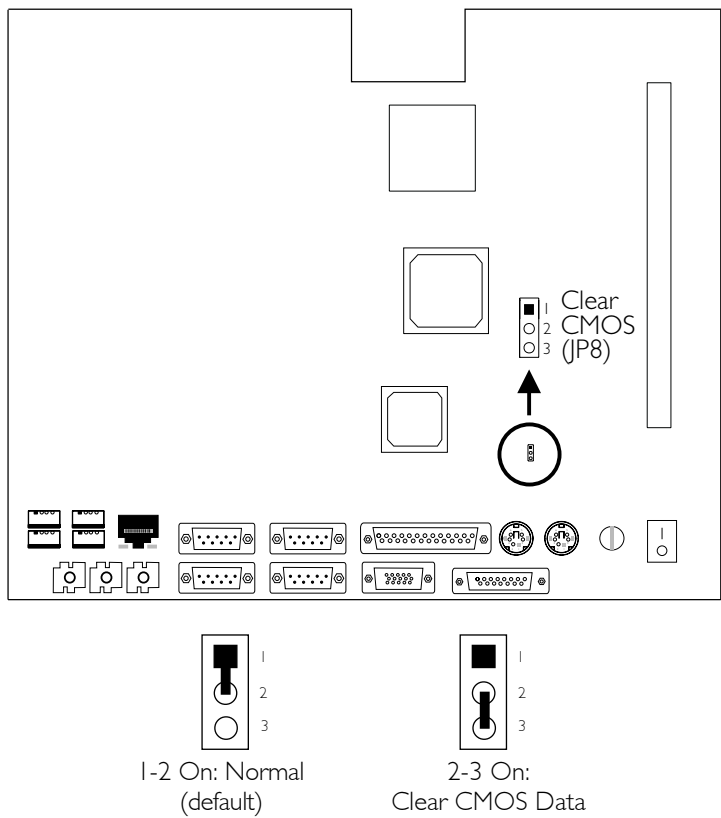
6.1 Selecting the LCD Voltage



LCD Voltage Select - Jumper JP9

JP9 is used to select the voltage of the LCD.

6.2 Clearing the CMOS Data



Clear CMOS Data - Jumper JP8

If you encounter the following,

- a) CMOS data becomes corrupted.
- b) You forgot the supervisor or user password.
- c) You are unable to boot-up the computer system because the processor's bus clock was incorrectly set in the BIOS.

you can reconfigure the system with the default values stored in the ROM BIOS.

To load the default values stored in the ROM BIOS, please follow the steps below.

1. Power-off the system and unplug the power cord.
2. Set JP8 pins 2 and 3 to On. Wait for a few seconds and set JP8 back to its default setting, pins 1 and 2 On.
3. Now power-on the system.

If your reason for clearing the CMOS data is due to incorrect setting of the processor's bus clock in the BIOS, please proceed to step 4.

4. After powering-on the system, press to enter the main menu of the BIOS.
5. Select the Frequency/Voltage Control submenu and press <Enter>.
6. Set the "CPU Host/PCI Clock" field to its default setting or an appropriate bus clock. Refer to the Frequency/Voltage Control section in chapter 7 for more information.
7. Press <Esc> to return to the main menu of the BIOS setup utility. Select "Save & Exit Setup" and press <Enter>.
8. Type <Y> and press <Enter>.

Chapter 7

Award BIOS Setup Utility

Standard CMOS Features
Advanced BIOS Features
Advanced Chipset Features
Integrated Peripherals
Power Management Setup
PnP/PCI Configurations
Frequency/Voltage Control
Load Fail-Safe Default
Load Optimized Default
Set Supervisor Password
Set User Password
Save & Exit Setup
Exit Without Saving

Chapter 7 - Award BIOS Setup Utility

7.1 The Basic Input/Output System

The Basic Input/Output System (BIOS) is a program that takes care of the basic level of communication between the processor and peripherals. In addition, the BIOS also contains codes for various advanced features found in this system board. This chapter explains the Setup Utility for the Award BIOS.

After you power up the system, the BIOS message appears on the screen and the memory count begins. After the memory test, the following message will appear on the screen:

Press DEL to enter setup

If the message disappears before you respond, restart the system or press the "Reset" button. You may also restart the system by pressing the <Ctrl> <Alt> and keys simultaneously.

When you press , the main menu screen will appear:

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software

<ul style="list-style-type: none">▶ Standard CMOS Features▶ Advanced BIOS Features▶ Advanced Chipset Features▶ Integrated Peripherals▶ Power Management Setup▶ PnP/PCI Configurations▶ PC Health Status	<ul style="list-style-type: none">▶ Frequency/Voltage Control<ul style="list-style-type: none">Load Fail-Safe DefaultsLoad Optimized DefaultsSet Supervisor PasswordSet User PasswordSave & Exit SetupExit Without Saving
Esc : Quit F10 : Save & Exit Setup	↑↓→← : Select Item
Time, Date, Hard Disk Type...	

7.1.1 Standard CMOS Features

Use the arrow keys to highlight "Standard CMOS Features" and press <Enter>. A screen similar to the one on the next page will appear:

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
Standard CMOS Features

Date (mm:dd:yy) Time (hh:mm:ss)		Thu, Mar 14 2002 4 : 35 : 5	Item Help
► IDE Primary Master		Press Enter None	Menu Level Change the day, month, year and century
► IDE Primary Slave		Press Enter None	
► IDE Secondary Master		Press Enter None	
► IDE Secondary Slave		Press Enter None	
Drive A		None	
Drive B		None	
Video		EGA/VGA	
Halt On		All, But Keyboard	
Base Memory		640K	
Extended Memory		129024K	
Total Memory		130048K	
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults			

The settings on the screen are for reference only.Your version may not be identical to this one.

Date

The date format is <day>, <month>, <date>, <year>. Day displays a day, from Sunday to Saturday. Month displays the month, from January to December. Date displays the date, from 1 to 31. Year displays the year, from 1994 to 2079.

Time

The time format is <hour>, <minute>, <second>.The time is based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00. Hour displays hours from 00 to 23. Minute displays minutes from 00 to 59. Second displays seconds from 00 to 59.

IDE Primary Master, IDE Primary Slave, IDE Secondary Master and IDE Secondary Slave

Move the cursor to the “IDE Primary Master”, “IDE Primary Slave”, “IDE Secondary Master” or “IDE Secondary Slave” field, then press <Enter>.

IDE HDD Auto Detection

Detects the parameters of the drive. The parameters will automatically be shown on the screen.

IDE Primary/Secondary Master/Slave

If you wish to define your own drive type manually, select "Manual". The drive type information should be included in the documentation from your hard disk vendor. If you select "Auto", the BIOS will auto-detect the HDD & CD-ROM drive at the POST stage and show the IDE for the HDD & CD-ROM drive. If a hard disk has not been installed, select "None".

Capacity

Displays the approximate capacity of the disk drive. Usually the size is slightly greater than the size of a formatted disk given by a disk checking program.

Access Mode

For hard drives larger than 528MB, you would typically select the LBA type. Certain operating systems require that you select Normal or Large. Please check your operating system's manual or Help desk on which one to select.

Drive A and Drive B

These fields identify the types of floppy disk drives installed.

- None* No floppy drive is installed
- 360K, 5.25 in.* 5-1/4 in. standard drive; 360KB capacity
- 1.2M, 5.25 in.* 5-1/4 in. AT-type high-density drive; 1.2MB capacity
- 720K, 3.5 in.* 3-1/2 in. double-sided drive; 720KB capacity
- 1.44M, 3.5 in.* 3-1/2 in. double-sided drive; 1.44MB capacity
- 2.88M, 3.5 in.* 3-1/2 in. double-sided drive; 2.88MB capacity

Video

This field selects the type of video adapter used for the primary system monitor. Although secondary monitors are supported, you do not have to select the type. The default setting is EGA/VGA.

- EGA/VGA* Enhanced Graphics Adapter/Video Graphics Array. For EGA,VGA, SVGA and PGA monitor adapters.
- CGA 40* Color Graphics Adapter. Power up in 40-column mode.
- CGA 80* Color Graphics Adapter. Power up in 80-column mode.
- Mono* Monochrome adapter. Includes high resolution monochrome adapters.

Halt On

This field determines whether the system will stop if an error is detected during power up.

- No Errors* The system boot will not stop for any errors detected.
- All Errors* The system boot will stop whenever the BIOS detects a non-fatal error.
- All, But Keyboard* The system boot will not stop for a keyboard error; it will stop for all other errors.
- All, But Diskette* The system boot will not stop for a disk error; it will stop for all other errors.
- All, But Disk/Key* The system boot will not stop for a disk or keyboard error; it will stop for all other errors.

Base Memory

Displays the amount of base (or conventional) memory installed in the system. The value of the base memory is typically 512K for systems with 512K memory installed on the motherboard or 640K for systems with 640K or more memory installed on the motherboard.

Extended Memory

Displays the amount of extended memory detected during boot-up.

Total Memory

Displays the total memory available in the system.

7.1.2 Advanced BIOS Features

The Advanced BIOS Features allows you to configure your system for basic operation. Some entries are defaults required by the system board, while others, if enabled, will improve the performance of your system or let you set some features according to your preference.

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software		
Advanced BIOS Features		
		Item Help
Virus Warning	Disabled	Menu Level Allows you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep
CPU Internal Cache	Enabled	
External Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	
Quick Power On Self Test	Enabled	
First Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	LS120	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Enabled	
Boot Up NumLock Status	On	
Gate A20 Option	Fast	
Typeomatic Rate Setting	Disabled	
X Typeomatic Rate (Chars/Sec)	6	
X Typeomatic Delay (Msec)	250	
Security Option	Setup	
OS Select For DRAM > 64MB	Non-OS2	
Video BIOS Shadow	Enabled	
C8000-CBFFF Shadow	Disabled	
CC000-CFFFF Shadow	Disabled	
D0000-D3FFF Shadow	Disabled	
D4000-D7FFF Shadow	Disabled	
D8000-DBFFF Shadow	Disabled	
DC000-DFFFF Shadow	Disabled	
Small Logo (EPA) Show	Enabled	
		:Exit F1:General Help F7:Optimized Defaults

The screen above list all the fields available in the Advanced BIOS Features submenu, for ease of reference in this manual. In the actual CMOS setup, you have to use the scroll bar to view the fields. The settings on the screen are for reference only. Your version may not be identical to this one.

Virus Warning

This field protects the boot sector and partition table of your hard disk drive. When this field is enabled, the Award BIOS will monitor the boot sector and partition table of the hard disk drive. If an attempt is made to write to the boot sector or partition table of the hard disk drive, the BIOS will halt the system and an error message will appear:

After seeing the error message, if necessary, you will be able to run an anti-virus program to locate and remove the problem before any damage is done.

Many disk diagnostic programs which attempt to access the boot sector table will cause the warning message to appear. If you are running such a program, we recommend that you first disable this field.

Also, disable this field if you are installing or running certain operating systems like Windows® 95/98/2000/ME/XP or the operating system may not install nor work.

CPU Internal Cache and External Cache

These fields speed up memory access. When set to Enabled, it enables the cache thus providing better system performance.

CPU L2 Cache ECC Checking

The processor supported by the system come with built-in Level 2 cache. By default, ECC is enabled to check the Level 2 cache. If you are not using this function, set this field to Disabled.

Quick Power On Self Test

This field speeds up Power On Self Test (POST) after you power on the system. When Enabled, the BIOS will shorten or skip some check items during POST.

First Boot Device, Second Boot Device, Third Boot Device and Boot Other Device

Select the drive to boot first, second and third in the "First Boot Device" "Second Boot Device" and "Third Boot Device" fields respectively. The BIOS will boot the operating system according to the sequence of the drive selected. Set "Boot Other Device" to Enabled if you wish to boot from another device.

Swap Floppy Drive

When this field is enabled and the system is booting from the floppy drive, the system will boot from drive B instead of drive A. When this field is disabled and the system is booting from the floppy drive, the system will boot from drive A. You must have two floppy drives to use this function.

Boot Up Floppy Seek

When enabled, the BIOS will check whether the floppy disk drive installed is 40 or 80 tracks. Note that the BIOS cannot distinguish between 720K, 1.2M, 1.44M and 2.88M drive types as they are all 80 tracks. When disabled, the BIOS will not search for the type of floppy

disk drive by track number. Note that there will not be any warning message if the drive installed is 360KB.

Boot Up NumLock Status

This allows you to determine the default state of the numeric keypad. By default, the system boots up with NumLock on wherein the function of the numeric keypad is the number keys. When set to Off, the function of the numeric keypad is the arrow keys.

Gate A20 Option

This entry allows you to select how gate A20 is handled. Gate A20 is a device used to address memory above 1 Mbyte. Initially, gate A20 was handled via the keyboard controller. Today, while keyboards still provide this support, it is more common, and much faster, for the system chipset to provide support for gate A20.

Typematic Rate Setting

- Disabled* Continually holding down a key on your keyboard will cause the BIOS to report that the key is down.
- Enabled* The BIOS will not only report that the key is down, but will first wait for a moment, and, if the key is still down, it will begin to report that the key has been depressed repeatedly. For example, you would use such a feature to accelerate cursor movements with the arrow keys. You can then select the typematic rate and typematic delay in the "Typematic Rate (Chars/Sec)" and "Typematic Delay (Msec)" fields below.

Typematic Rate (Chars/Sec)

This field allows you to select the rate at which the keys are accelerated.

Typematic Delay (Msec)

This field allows you to select the delay between when the key was first depressed and when the acceleration begins.

Security Option

This field determines when the system will prompt for the password - everytime the system boots or only when you enter the BIOS setup. Set the password in the Set Supervisor/User Password submenu.

- System* The system will not boot and access to Setup will be denied unless the correct password is entered at the prompt.
- Setup* The system will boot, but access to Setup will be denied unless the correct password is entered at the prompt.

OS Select for DRAM > 64MB

This field allows you to access the memory that is over 64MB in OS/2.

Video BIOS Shadow

Determines whether video BIOS will be copied to RAM.Video Shadow will increase the video speed. Note that some graphics boards require that this option be disabled.The default value is Enabled.

- Enabled* Video shadow is enabled.
- Disabled* Video shadow is disabled.

C8000-CBFFF Shadow to DC000-DFFFF Shadow


These fields determine whether option ROMs will be copied to RAM.

- Enabled* Optional shadow is enabled.
- Disabled* Optional shadow is disabled.

Small Logo(EPA) Show

- Enabled* The EPA logo will appear during system boot-up.
- Disabled* The EPA logo will not appear during system boot-up.

7.1.3 Advanced Chipset Features

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software			
Advanced Chipset Features			
Bank Interleave	Disabled		Item Help
P2C/C2P Concurrency	Enabled		Menu Level
System BIOS Cacheable	Disabled		
Video RAM Cacheable	Disabled		
Frame Buffer Size	8M		
AGP Aperture Size	64M		
AGP Driving Control	Auto		
Panel Type	07		
OnChip USB	Enabled		
USB Keyboard Support	Enabled		
OnChip Sound	Auto		
CPU to PCI Write Buffer	Enabled		
PCI Dynamic Bursting	Enabled		
PCI Master 0 WS Write	Enabled		
PCI Delay Transaction	Disabled		
PCI#2 Access #1 Retry	Enabled		
AGP Master 1 WS Write	Disabled		
AGP Master 1 WS Read	Disabled		
↑↓←→ Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults			

The screen above list all the fields available in the Advanced Chipset Features submenu, for ease of reference in this manual. In the actual CMOS setup, you have to use the scroll bar to view the fields. The settings on the screen are for reference only. Your version may not be identical to this one.

This section gives you functions to configure the system based on the specific features of the chipset. The chipset manages bus speeds and access to system memory resources. **These items should not be altered unless necessary.** The default settings have been chosen because they provide the best operating conditions for your system. The only time you might consider making any changes would be if you discovered some incompatibility or that data was being lost while using your system.

Bank Interleave

The options are 2 Bank, 4 Bank and Disabled.

P2C/C2P Concurrency

When enabled, the PCI/AGP master to CPU cycle will be concurrent whenever the Host CPU is performing R/W access to the PCI or slave devices.

System BIOS Cacheable

When this field is enabled, accesses to the system BIOS ROM addressed at F0000H-FFFFFH are cached, provided that the cache controller is enabled. The larger the range of the Cache RAM, the higher the efficiency of the system.

Video RAM Cacheable

When enabled, it allows the video RAM to be cacheable thus providing better video performance. If your graphics card does not support this function, set this field to Disabled.

Frame Buffer Size

The options are 2M, 4M, 8M, 16M and 32M.

AGP Aperture Size

This field is relevant to the memory-mapped graphics data of the AGP card installed in your system. Leave this in its default setting.

AGP Driving Control

Set this field to Manual only if there are compatibility problems with some AGP cards.

OnChip USB

This field is used to enable or disable the USB function.

USB Keyboard Support

If you are using a USB keyboard under DOS, set this field to Enabled. This field can be configured only if the "OnChip USB" field is enabled.

OnChip Sound

By default, this field is set to Auto - the onboard sound controller enabled. If you are using an audio add-in card, set this field to Disabled.

CPU to PCI Write Buffer

Enabled Writes from the CPU to the PCI bus are buffered to offset the speed difference between the CPU and PCI bus.

Disabled Writes are not buffered therefore the CPU must wait until the write cycle is complete before starting another write cycle.

PCI Dynamic Bursting

When enabled, every write transaction goes to the write buffer.

PCI Master 0 WS Write

When enabled, writes to the PCI bus are executed with zero wait state.

PCI Delay Transaction

When enabled, this function frees up the PCI bus for other PCI masters during the PCI-to-ISA transactions. This allows PCI and ISA buses to be used more efficiently and prevents degradation of performance on the PCI bus when ISA accesses are made.

PCI#2 Access #1 Retry

Set this field to Enabled if you want to rotate the priority of the PCI masters.

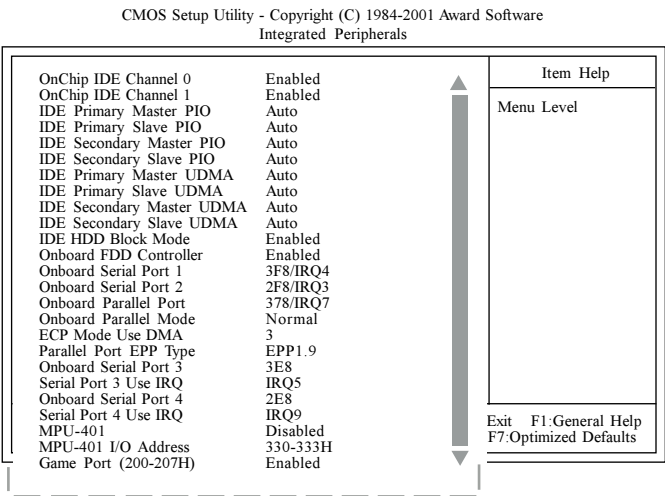
AGP Master | WS Write

Set this field to Enabled to add one clock tick to AGP write operations.

AGP Master | WS Read

Set this field to Enabled to add one clock tick to AGP read operations.

7.1.4 Integrated Peripherals



The screen above list all the fields available in the Integrated Peripherals submenu, for ease of reference in this manual. In the actual CMOS setup, you have to use the scroll bar to view the fields. The settings on the screen are for reference only. Your version may not be identical to this one.

OnChip IDE Channel 0

This field is used to enable or disable the drive that is connected to the IDE 1 (CN2) connector:

OnChip IDE Channel 1

This field is used to enable or disable the Disk-On-Module (DOM) device that is connected to the DOM (CN4) connector:

IDE Primary Master/Slave PIO and IDE Secondary Master/Slave PIO

PIO means Programmed Input/Output. Rather than have the BIOS issue a series of commands to effect a transfer to or from the disk drive, PIO allows the BIOS to tell the controller what it wants and then let the controller and the CPU perform the complete task by themselves. Your system supports five modes, 0 (default) to 4, which primarily differ in timing. When Auto is selected, the BIOS will select the best available mode after checking your drive.

Auto The BIOS will automatically set the system according to your hard disk drive's timing.

Mode 0-4 You can select a mode that matches your hard disk drive's timing. Caution: Do not use the wrong setting or you will have drive errors.

IDE Primary Master/Slave UDMA and IDE Secondary Master/Slave UDMA

These fields allow you to set the Ultra DMA in use. When Auto is selected, the BIOS will select the best available option after checking your hard drive or CD-ROM.

Auto The BIOS will automatically detect the settings for you.

Disabled The BIOS will not detect these categories.

IDE HDD Block Mode

Enabled The IDE HDD uses the block mode. The system BIOS will check the hard disk drive for the maximum block size the system can transfer. The block size will depend on the type of hard disk drive.

Disabled The IDE HDD uses the standard mode.

Onboard FDD Controller

Enabled Enables the onboard floppy disk controller.

Disabled Disables the onboard floppy disk controller.

Onboard Serial Port 1 and Onboard Serial Port 2

3F8//IRQ4, 2F8//IRQ3, 3E8//IRQ4, 2E8//IRQ3 Allows you to manually select an I/O address for the onboard serial port 1 and serial port 2.

Disabled Disables the onboard serial port 1 and/or serial port 2.

Onboard Parallel Port

378//IRQ7, 3BC//IRQ7, 278//IRQ5 Selects the I/O address and IRQ for the onboard parallel port.

Disabled Disables the onboard parallel port.

Onboard Parallel Mode

The options are Normal, EPP, ECP and ECP/EPP. These apply to a standard specification and will depend on the type and speed of your device. Refer to your peripheral's manual for the best option.

Normal

Allows normal speed operation but in one direction only.

ECP (Extended Capabilities Port)

Allows parallel port to operate in bidirectional mode and at a speed faster than the normal mode's data transfer rate.

EPP (Enhanced Parallel Port)

Allows bidirectional parallel port operation at maximum speed.

If you selected EPP, the "Parallel Port EPP Type" field is configurable. If you selected ECP, the "ECP Mode Use DMA" field is configurable. If you selected ECP/EPP, both "Parallel Port EPP Type" and "ECP Mode Use DMA" are configurable.

ECP Mode Use DMA

This is used to select the DMA channel of the parallel port.

Parallel Port EPP Type

This is used to select the EPP mode.

Onboard Serial Port 3

This is used to select an I/O address for the onboard serial port 3. However, if the LCD Display Panel supports touchscreen, leave this field in its default setting because the touchscreen is internally connected to COM 3 therefore a default address has already been assigned to this port. Make sure COM 3 is not attached with a serial device.

Serial Port 3 Use IRQ

This is used to select an IRQ for the onboard serial port 3. This field is not configurable if the “Onboard Serial Port 3” field is set to Disabled.

Onboard Serial Port 4

This is used to select an I/O address for the onboard serial port 4.

Serial Port 4 Use IRQ

This is used to select an IRQ for the onboard serial port 4. This field is not configurable if the "Onboard Serial Port 4" field is set to Disabled.

MPU-40 I

This field is used to enable or disable MPU-401.

MPU-401 I/O Address

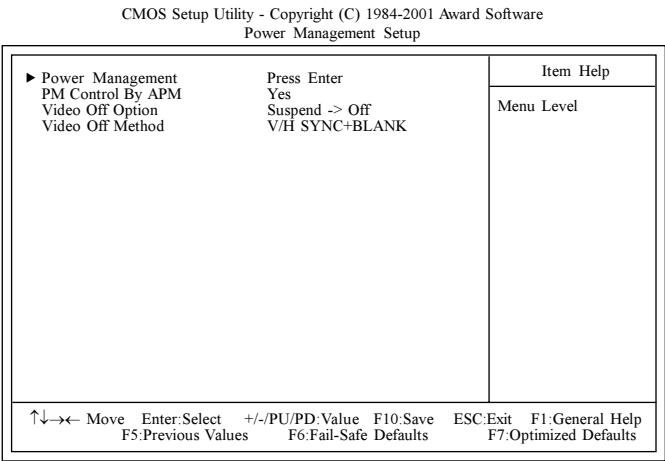
This field is used to select MPU-401's I/O address.

Game Port (200-207H)

This field is used to enable or disable the game port.

7.1.5 Power Management Setup

The Power Management Setup allows you to configure your system to most effectively save energy.



The settings on the screen are for reference only. Your version may not be identical to this one.

Power Management

This field allows you to select the type (or degree) of power saving by changing the length of idle time that elapses before the "Doze Mode" and "Suspend Mode" fields are activated. Move the cursor to this field and press <Enter>.

Power Management

- Min Saving* Minimum power saving time for the Doze Mode and Suspend Mode = 1 hr.
- Max Saving* Maximum power saving time for the Doze Mode and Suspend Mode = 1 min.
- User Define* Allows you to set the power saving time in the "Doze Mode" and "Suspend Mode" fields.

HDD Power Down

When the system enters the power saving time set in this field, the hard disk drive will be powered down while all other devices remain active.

Doze Mode

This is configurable only when the Power Management field is set to “User Define”. When the system enters the power saving time set in this field, the CPU clock will run at a slower speed (1/2 of full speed) while all other devices still operate at full speed.

Suspend Mode

This is configurable only when the Power Management field is set to “User Define”. When the system enters the power saving time set in this field, the CPU and onboard peripherals will be shut off.

PM Control by APM

- Yes

An Advanced Power Management device will be activated to enhance the Max. Power Saving mode and stop the CPU's internal clock. Use this option in Windows® 95/98/2000/ME. (default)
- No

The system BIOS will ignore APM when initiating the Power Management mode.

Video Off Option

- Always On

The system BIOS will never turn off the screen.
- Suspend -> Off

The screen is off when the system is in the Suspend mode.
- All Modes -> Off

The screen is off when the system is in the Doze or Suspend mode.

Video Off Method

This determines the manner in which the monitor is blanked.

- VIH SYNC + Blank

This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.
- Blank Screen

This option only writes blanks to the video buffer.
- DPMS Support

Initializes display power management signaling. Use this option if your video board supports it.

7.1.6 PnP/PCI Configurations

This section describes configuring the PCI bus system. It covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software PnP/PCI Configurations		
PNP OS Installed	No	Item Help Menu Level Default is Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot.
Reset Configuration Data	Disabled	
Resources Controlled By	Auto(ESCD)	
X IRQ Resources	Press Enter	
X DMA Resources	Press Enter	
PCI/VGA Palette Snoop	Disabled	
Assign IRQ For VGA	Enabled	
Assign IRQ For USB	Enabled	
PCI Slot 1 Use IRQ	Auto	
PCI Slot 2 Use IRQ	Auto	
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults		

The settings on the screen are for reference only. Your version may not be identical to this one.

PNP OS Installed

The default setting is "No". The BIOS will detect the Plug and Play devices for some compatible resources.

Reset Configuration Data

- Enabled* The BIOS will automatically reset the Extended System Configuration Data (ESCD) once. It will then recreate a new set of configuration data.
- Disabled* The BIOS will not reset the configuration data.

Resources Controlled By

The Award Plug and Play BIOS has the capability to automatically configure all of the boot and Plug and Play compatible devices.

- | | |
|-------------------|---|
| <i>Auto(ESCD)</i> | The system will automatically detect the settings for you. |
| <i>Manual</i> | Choose the specific IRQ and DMA in the "IRQ Resources" and "DMA Resources" fields respectively. |

IRQ Resources

Move the cursor to this field and press <Enter>. This field is used to set each system interrupt to either Legacy ISA or PCI/ISA PnP.

- | | |
|--------------------|--|
| <i>PCI/ISA PnP</i> | For devices compliant with the PCI bus architecture. |
| <i>Legacy ISA</i> | For devices compliant with the original PC AT bus specification. |

DMA Resources

Move the cursor to this field and press <Enter>. This field is used to set each DMA address to either Legacy ISA or PCI/ISA PnP.

- | | |
|-------------|--|
| PCI/ISA PnP | For devices compliant with the PCI bus architecture. |
| Legacy ISA | For devices compliant with the original PC AT bus specification. |

PCI/VGA Palette Snoop

This field determines whether the MPEG ISA/VESA VGA cards can work with PCI/VGA or not.

- | | |
|-----------------|---|
| <i>Enabled</i> | MPEG ISA/VESA VGA cards work with PCI/VGA. |
| <i>Disabled</i> | MPEG ISA/VESA VGA cards does not work with PCI/VGA. |

Assign IRQ for VGA

When Enabled, the system automatically assigns an IRQ for the VGA card installed. Your VGA card will need an IRQ only when using the video capture function of the card. If you are not using this function and a new device requires an IRQ, you can set this field to Disabled. The IRQ (previously occupied by the VGA card) will be available for your new device.



Note:

When Disabled, a "Yellow" mark will appear in Windows® 95's Device Manager.

Assign IRQ for USB

When Enabled, the system automatically assigns an IRQ for the USB device connected to your system. However, if you are not using USB devices and an ISA slot requires an IRQ, set this field to Disabled. The IRQ previously occupied by the USB device will be available for the ISA slot.



Note:

When Disabled, a "Yellow" mark will appear in Windows® 95's Device Manager.

PCI Slot 1 Use IRQ and PCI Slot 2 Use IRQ

By default, an IRQ is automatically assigned to the PCI devices that are installed in the PCI slots. If a PCI device has not been assigned an IRQ, you must manually assign an IRQ for the device. During system boot-up, you will see "NA" for the device that does not have an IRQ assigned.

7.1.7 PC Health Status

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
PC Health Status

		Item Help
Current CPU Temp.	40C/66F	Menu Level
Current System Temp.	27C/80F	
Current CPU FAN Speed	0 RPM	
Current Chassis FAN Speed	0 RPM	
Vcore	1.04 V	
2.5V	1.47V	
3.3V	3.31 V	
5V	5.05 V	
12V	12.03 V	
↑↓←→ Move Enter>Select +/-/PU/PD: Value F10: Save F5: Previous Values F6: Fail-Safe Defaults		ESC: Exit F1: General Help F7: Optimized Defaults

The settings on the screen are for reference only. Your version may not be identical to this one.

Current CPU Temperature, Current System Temperature, Current CPU Fan Speed and Current Chassis Fan Speed

These fields show the current temperature of the CPU, internal temperature of the system, and the current fan speed of the CPU fan and chassis fan in RPM (Revolutions Per Minute).

Vcore

This field shows the voltage of the processor.

2.5V, 3.3V, 5V and 12V

These fields show the output voltage of the power supply.

7.1.9 Load Fail-Safe Defaults

The “Load Fail-Safe Defaults” option loads the troubleshooting default values permanently stored in the ROM chips. These settings are not optimal and turn off all high performance features. You should use these values only if you have hardware problems. Highlight this option in the main menu and press <Enter>. The message below will appear:

Load Fail-Safe Defaults (Y/N)? N

If you want to proceed, type <Y> and press <Enter>. The default settings will be loaded.

7.1.10 Load Optimized Defaults

The “Load Optimized Defaults” option loads optimized settings from the BIOS ROM. Use the default values as standard values for your system. Highlight this option in the main menu and press <Enter>. The message below will appear:

Load Optimized Defaults (Y/N)? N

Type <Y> and press <Enter> to load the Setup default values.

7.1.11 Set Supervisor Password

If you want to protect your system and setup from unauthorized entry, set a supervisor's password with the "System" option selected in the Advanced BIOS Features. If you want to protect access to setup only, but not your system, set a supervisor's password with the "Setup" option selected in the Advanced BIOS Features. You will not be prompted for a password when you cold boot the system.

Use the arrow keys to highlight "Set Supervisor Password" and press <Enter>. The message below will appear:

Enter Password:

Type in the password. You are limited to eight characters. When done, the message below will appear:

Confirm Password:

You are asked to verify the password. Type in exactly the same password. If you type in a wrong password, you will be prompted to enter the correct password again. To delete or disable the password function, highlight "Set Supervisor Password" and press <Enter>, instead of typing in a new password. Press the <Esc> key to return to the main menu.

7.1.12 Set User Password

If you want another user to have access only to your system but not to setup, set a user's password with the "System" option selected in the Advanced BIOS Features. If you want a user to enter a password when trying to access setup, set a user's password with the "Setup" option selected in the Advanced BIOS Features.

Using user's password to enter Setup allows a user to access only "Set User Password" that appears in the main menu screen. Access to all other options is denied. To set, confirm, verify, disable or delete a user's password, follow the procedures described in the section "Set Supervisor Password".

7.1.13 Save & Exit Setup

When all the changes have been made, highlight "Save & Exit Setup" and press <Enter>. The message below will appear:

Save to CMOS and Exit (Y/N)? N

Type "Y" and press <Enter>. The modifications you have made will be written into the CMOS memory, and the system will reboot. You will once again see the initial diagnostics on the screen. If you wish to make additional changes to the setup, press <Ctrl> <Alt> <Esc> simultaneously or after memory testing is done.

7.1.14 Exit Without Saving

When you do not want to save the changes you have made, highlight "Exit Without Saving" and press <Enter>. The message below will appear:

Quit Without Saving (Y/N)? N

Type "Y" and press <Enter>. The system will reboot and you will once again see the initial diagnostics on the screen. If you wish to make any changes to the setup, press <Ctrl> <Alt> <Esc> simultaneously or after memory testing is done.

Chapter 8

Watchdog Timer

Chapter 8 - Watchdog Timer

The following are parameters for setting the time interval of the Watchdog Timer function. The system will be regularly “cleared” according to the set time interval. If the system hangs or fails to function, it will also reset according to the time interval so that your system will continue to operate.

Debug <Enter>

- o 370,87 <Enter>
- o 370,87 <Enter>
- o 370,07 <Enter>
- o 371,08 <Enter>
- o 370,f2 <Enter>
- o 371,XY <Enter>

“XY” is the Watchdog Time count value for the “00h to “FFh” range wherein the time can be set from 0 sec. to 255 sec.

Chapter 9

Drivers

VIA Service Pack
S3 VGA Driver for Windows
Avance AC'97 Audio Driver
RTL8100 LAN Driver
Microsoft DirectX 8.1 Driver
EloTouch Driver
MicroTouch Driver
Installation Notes

Chapter 9 - Drivers

A CD is provided with the Panel PC. To install a driver, insert the CD into a CD-ROM drive. The autorun screen, same as the one shown below, will appear:



9.1 VIA Service Pack

The VIA Service Pack includes the following drivers.

- VIA ATAPI Vendor Support Driver
- AGP VxD Driver
- IRQ Routing Miniport Driver
- VIA INF Driver

VIA Service Pack Installation Notes

The “AGP VxD Driver” and “VIA INF Driver” drivers in the “VIA Service Pack” are supported in Windows® 98, Windows® 98 SE, Windows® ME and Windows® 2000.

You must first install the VIA Service Pack prior to installing any other drivers. However, this may not be the case for some AGP cards. Please read carefully the following information.



Important:

The VGA driver that came with some AGP cards is already bundled with the AGP VxD driver. Since the version of the bundled VxD driver may be older than the one provided in the CD, installing the bundled VxD driver may cause problems. If you are using this type of card, we recommend that you install first the AGP card's VGA driver before installing the VIA Service Pack.

To install the VIA Service pack, please follow the steps below.

1. Insert the CD into a CD-ROM drive. The autorun screen will appear.
2. Click “VIA Service Pack”.
3. The “Welcome” screen will appear. Click “Next”. Please read the “VIA Service Pack readme” carefully before proceeding to step 4.
4. Follow the prompts on the screen to complete the installation.
5. Reboot the system for the drivers to take effect.

For more installation instructions or information, click the “Read Me” button in the autorun screen.

9.2 S3 VGA Driver for Windows

1. Insert the CD into a CD-ROM drive. The autorun screen will appear.
2. Click "S3 VGA Drivers for Windows".
3. Follow the prompts on the screen to complete installation.
4. Restart the system.

For installation instructions or information, click the “Read Me” button in the autorun screen. The autorun screen normally appears after the CD is inserted into a CD-ROM drive.

9.3 Avance AC'97 Audio Driver

1. Insert the CD into a CD-ROM drive. The autorun screen will appear.
2. Click "Avance AC'97 Audio Drivers".
3. Follow the prompts on the screen to complete installation.
4. Restart the system.

For installation instructions or information, click the “Read Me” button in the autorun screen. The autorun screen normally appears after the CD is inserted into a CD-ROM drive.

9.4 RTL8100 LAN Driver

The LAN driver for Windows NT® 4.0 does not support “Autorun”. Once the PC has detected the Realtek RTL8100 fast ethernet controller, it will prompt you to install the driver for the operating system you are using. The driver is in the “RTL8100” root directory of the CD.

The LAN drivers for Windows® 98, Windows® 98 SE, Windows® ME, Windows® 2000 and Windows® XP support “Autorun”. When you insert the CD into a CD-ROM drive, the “Autorun” screen will appear. Click “RTL8100 LAN Drivers”, then follow the prompts on the screen to complete installation.

9.5 Microsoft DirectX 8.1 Driver

1. Insert the CD into a CD-ROM drive. The autorun screen will appear.
2. Click “Microsoft DirectX 8.1 Driver”.
3. Click “Yes” to continue.
4. Follow the prompts on the screen to complete installation.
5. Restart the system.

9.6 EloTouch Drivers

1. Insert the CD into a CD-ROM drive. The autorun screen will appear.
2. Click “EloTouch Drivers”.
3. Follow the prompts on the screen to complete installation.
4. Restart the system.

For installation instructions or information, click the “Read Me” button in the autorun screen. The autorun screen normally appears after the CD is inserted into a CD-ROM drive.

9.7 MicroTouch Drivers

1. Insert the CD into a CD-ROM drive. The autorun screen will appear.
2. Click “MicroTouch Drivers”.
3. Follow the prompts on the screen to complete installation.
4. Restart the system.

For installation instructions or information, click the “Read Me” button in the autorun screen. The autorun screen normally appears after the CD is inserted into a CD-ROM drive.

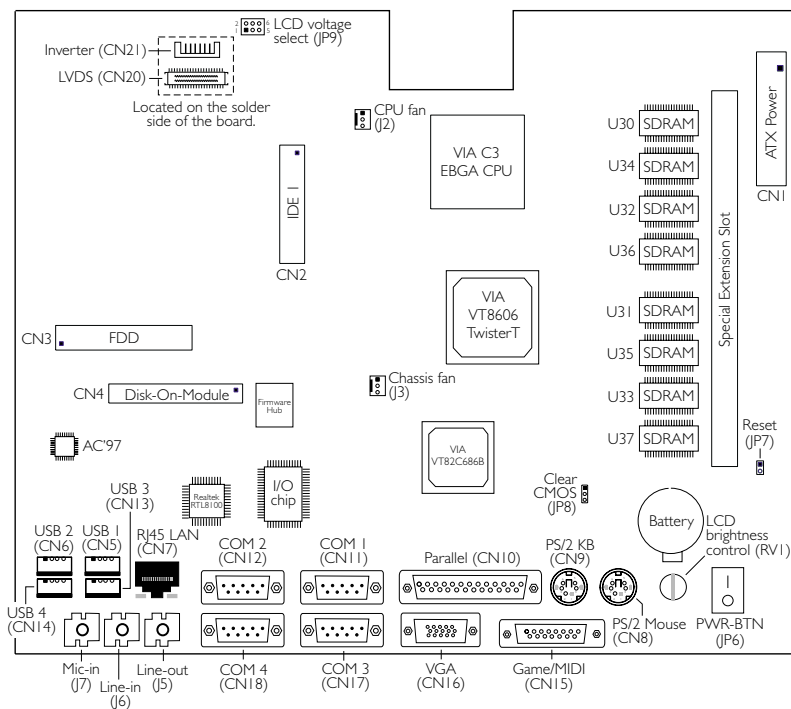
9.8 Installation Notes

1. "Autorun" ONLY supports the Windows® 95, Windows® 98, Windows® 98 SE, Windows® ME, Windows® 2000, Windows NT® 4.0 and Windows® XP operating systems. If after inserting the CD, "Autorun" did not automatically start, please go directly to the root directory of the CD and double-click "Setup".
2. Make sure to first install the VGA driver prior to installing the audio driver. This will provide better compatibility to the entire PC.
3. All steps or procedures to install software drivers are subject to change without notice as the softwares are occasionally updated. Please refer to the readme files, if available, for the latest information.

Chapter 10

Mainboard Layout

Chapter 10 - Mainboard Layout

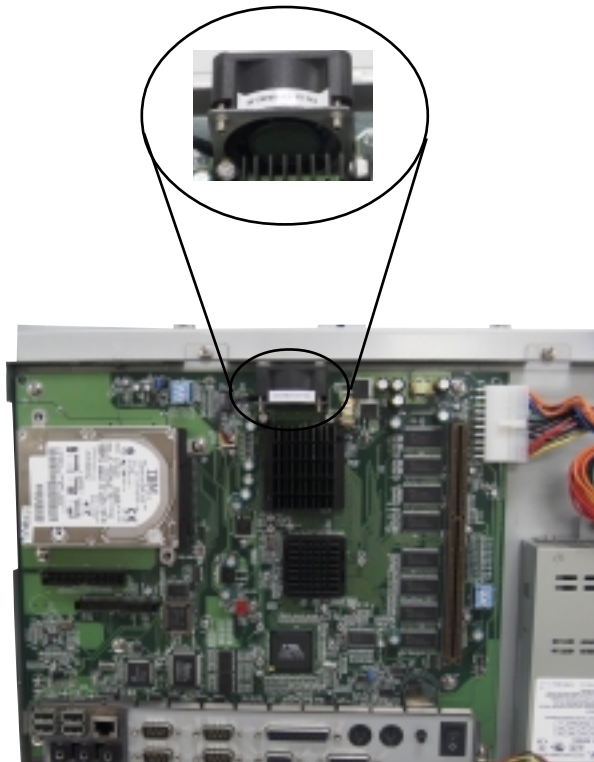


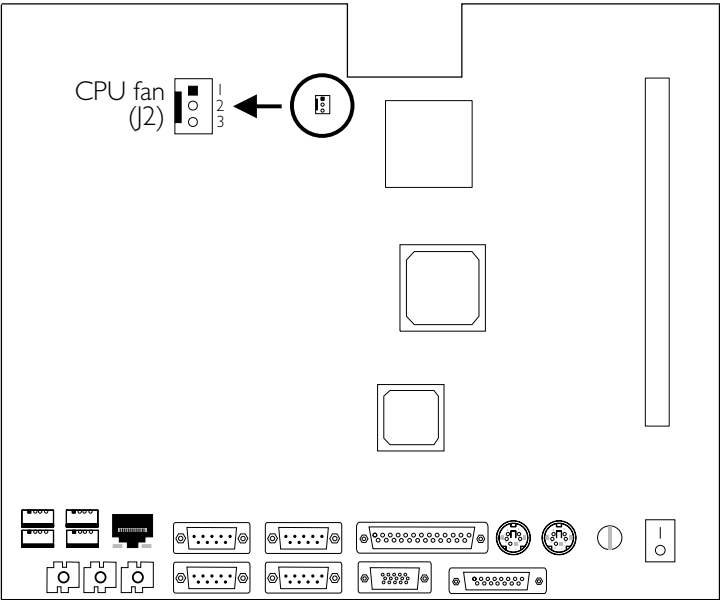
Chapter 11

CPU Fan

Chapter 11 - CPU Fan

The PC is equipped with a CPU fan. The fan will provide adequate airflow throughout the chassis to prevent overheating the CPU or other components.





Location of the CPU Fan Connector on the Mainboard

Chapter 12

Connector Pin Function

COM 1, COM 2, COM 3, COM 4
RJ45 LAN, VGA,
USB 1, USB 2, USB 3, USB 4
Line-in, Mic-in, Line-out, Game
CPU Fan, Chassis Fan
PS/2 Keyboard, PS/2 Mouse
Parallel, ATX Power, FDD
Inverter, LVDS
IDE 1, DOM,
Special Expansion Slot

Chapter 12 - Connector Pin Function

12.1 COM 1

Pins	Function	Pins	Function
1	NDCD1	6	NDSR1
2	NSIN1	7	NRTS1
3	NSOUT1	8	NCTS1
4	NDTR1	9	MR11-
5	GROUND		

12.2 COM 2

Pins	Function	Pins	Function
1	NDCD2	6	NDSR2
2	NSIN2	7	NRTS2
3	NSOUT2	8	NCTS2
4	NDTR2	9	MR12-
5	GROUND		

12.3 COM 3

Pins	Function	Pins	Function
1	NDCD3	6	NDSR3
2	NSIN3	7	NRTS3
3	NSOUT3	8	NCTS3
4	NDTR3	9	MR13-
5	GROUND		

12.4 COM 4

Pins	Function	Pins	Function
1	NDCD4	6	NDSR4
2	NSIN4	7	NRTS4
3	NSOUT4	8	NCTS4
4	NDTR4	9	MRI4-
5	GROUND		

12.5 RJ45 LAN

Pins	Function	Pins	Function
1	TX+	6	RX-
2	TX-	7	N/C3
3	RX+	8	N/C4
4	N/C1	9	GROUND
5	N/C2	10	GROUND

12.6 VGA

Pins	Function	Pins	Function
1	RED	10	Ground
2	GREEN	11	N. C.
3	BLUE	12	SPD2
4	N. C.	13	HSYNC
5	GROUND	14	VSYNC
6	GROUND	15	SPCLK2
7	GROUND	16	GROUND
8	GROUND	17	GROUND
9	N. C.		

12.7 USB 1

Pins	Function	Pins	Function
1	+5V	4	GROUND
2	USBP0-	5	GROUND
3	USBP0+	6	GROUND

12.8 USB 2

Pins	Function	Pins	Function
1	+5V	4	GROUND
2	USBP1-	5	GROUND
3	USBP1+	6	GROUND

12.9 USB 3

Pins	Function	Pins	Function
1	+5V	4	GROUND
2	USBP2-	5	GROUND
3	USBP2+	6	GROUND

12.10 USB 4

Pins	Function	Pins	Function
1	+5V	4	GROUND
2	USBP3-	5	GROUND
3	USBP3+	6	GROUND

12.11 Line-in

Pins	Function	Pins	Function
1	GROUND	5	GROUND
2	LINR	6	---
3	LINL	7	GROUND
4	LINR	8	LINL

12.12 Mic-in

Pins	Function	Pins	Function
1	GROUND	5	N. C.
2	GROUND	6	---
3	MIC	7	GROUND
4	GROUND	8	MIC

12.13 Line-out

Pins	Function	Pins	Function
1	GROUND	5	N. C.
2	HPOUT L	6	---
3	HPOUT R	7	N. C.
4	N. C.	8	N. C.

12.14 Game

Pins	Function	Pins	Function
1	+5V	9	+5V
2	JAB1	10	JBB1
3	JACX	11	JBCX
4	GROUND	12	MSO
5	GROUND	13	JBCY
6	JACY	14	JBB2
7	JAB2	15	MSI
8	+5V		

12.15 CPU Fan

Pins	Function
1	GROUND
2	+12V
3	FAN1

12.16 Chassis Fan

Pins	Function
1	GROUND
2	+12V
3	FAN2

12.17 PS/2 Keyboard

Pins	Function	Pins	Function
1	KBDAT	6	N. C.
2	N. C.	7	GROUND
3	Ground	8	GROUND
4	+5V	9	GROUND
5	KBCLK	10	GROUND

12.18 PS/2 Mouse

Pins	Function	Pins	Function
1	MSDAT	6	N. C.
2	N. C.	7	GROUND
3	GROUND	8	GROUND
4	+5V	9	GROUND
5	MSCLK	10	GROUND

12.19 Parallel

Pins	Function	Pins	Function
1	STROBE-	14	AUTOF-
2	PD0	15	ERROR
3	PD1	16	INIT-
4	PD2	17	SLCTIN
5	PD3	18	GROUND
6	PD4	19	GROUND
7	PD5	20	GROUND
8	PD6	21	GROUND
9	PD7	22	GROUND
10	ACK-	23	GROUND
11	BUSY	24	GROUND
12	PE	25	GROUND
13	SLCT		

12.20 ATX Power

Pins	Function	Pins	Function
1	+3V	11	+3V
2	+3V	12	-12V
3	GROUND	13	GROUND
4	+5V	14	PS-ON
5	GROUND	15	GROUND
6	+5V	16	GROUND
7	GROUND	17	GROUND
8	PW-OK	18	-5V
9	5VSB	19	+5V
10	+12V	20	+5V

12.21 FDD

Pins	Function	Pins	Function
1	GROUND	18	DIR-
2	DEN0	19	GROUND
3	GROUND	20	STEP-
4	N. C.	21	GROUND
5	GROUND	22	WDATA-
6	DEN1	23	GROUND
7	GROUND	24	WGATE-
8	INDEX-	25	GROUND
9	GROUND	26	TRACK0-
10	MTR0-	27	GROUND
11	GROUND	28	WP-
12	DS1-	29	N. C.
13	GROUND	30	RDATA-
14	DS0-	31	GROUND
15	GROUND	32	HDSEL-
16	MTR1-	33	N. C.
17	GROUND	34	DSKCHG-

12.22 Inverter

Pins	Function	Pins	Function
1	+12V	5	PANELVCC
2	+12V	6	+3V
3	BACKLIGHT	7	GROUND
4	+3V	8	GROUND

12.23 LVDS

Pins	Function	Pins	Function
1	VGND	21	Y0P
2	VGND	22	Z0P
3	N. C.	23	Y0M
4	N. C.	24	Z0M
5	N. C.	25	VGND
6	N. C.	26	VGND
7	VGND	27	YCP
8	VGND	28	ZCP
9	Y2P	29	YCM
10	Z2P	30	ZCM
11	Y2M	31	VGND
12	Z2M	32	VGND
13	VGND	33	NDTR3
14	VGND	34	NSOUT3
15	Y1P	35	NRTS3
16	Z1P	36	MRI3-
17	Y1M	37	MSIN3
18	Z1M	38	NDSR3
19	VGND	39	NCTS3
20	VGND	40	NDCD3

12.24 IDE I

Pins	Function	Pins	Function
1	RSTDRV-	23	PDIOW-
2	GROUND	24	GROUND
3	PDD7	25	PDIOR-
4	PDD8	26	GROUND
5	PDD6	27	PDIORDY
6	PDD9	28	PDCSEL
7	PDD5	29	PDDACK-
8	PDD10	30	GROUND
9	PDD4	31	IRQ14
10	PDD11	32	N. C.
11	PDD3	33	PDA1
12	PDD12	34	RP66-
13	PDD2	35	PDA0
14	PDD13	36	PDA2
15	PDD1	37	PDCS1-
16	PDD14	38	PDCS3-
17	PDD0	39	+5V
18	PDD15	40	GROUND
19	GROUND	41	+5V
20	N. C.	42	+5V
21	PDDREQ	43	GROUND
22	GROUND	44	N. C.

12.25 DOM

Pins	Function	Pins	Function
1	RSTDRV-	23	SDIOW-
2	GROUND	24	GROUND
3	SDD7	25	SDIOR-
4	SDD8	26	GROUND
5	SDD6	27	SDIORDY
6	SDD9	28	SDCSEL
7	SDD5	29	SDDACK-
8	SDD10	30	GROUND
9	SDD4	31	IRQ15
10	SDD11	32	N. C.
11	SDD3	33	SDA1
12	SDD12	34	RSU66-
13	SDD2	35	SDA0
14	SDD13	36	SDA2
15	SDD1	37	SDCS1-
16	SDD14	38	SDCS3-
17	SDD0	39	+5V
18	SDD15	40	GROUND
19	GROUND	41	+5V
20	N. C.	42	+5V
21	SDDREQ	43	GROUND
22	GROUND	44	N. C.

12.26 Special Expansion Slot

Pins	Function	Pins	Function
B1	N. C.	A1	N. C.
B2	N. C.	A2	N. C.
B3	N. C.	A3	N. C.
B4	N. C.	A4	N. C.
B5	N. C.	A5	N. C.
B6	N. C.	A6	N. C.
B7	N. C.	A7	N. C.
B8	N. C.	A8	N. C.
B9	N. C.	A9	N. C.
B10	N. C.	A10	N. C.
B11	N. C.	A11	N. C.
B12	N. C.	A12	N. C.
B13	N. C.	A13	N. C.
B14	N. C.	A14	N. C.
B15	N. C.	A15	N. C.
B16	N. C.	A16	N. C.
B17	N. C.	A17	N. C.
B18	N. C.	A18	N. C.
B19	N. C.	A19	N. C.
B20	N. C.	A20	N. C.
B21	N. C.	A21	N. C.
B22	+12V	A22	+12V
B23	+12V	A23	+12V
B24	+12V	A24	+12V
B25	N. C.	A25	N. C.
B26	-12V	A26	+12V
B27	-12V	A27	+12V
B28	-12V	A28	+12V
B29	N. C.	A29	N. C.
B30	+5V	A30	+5V
B31	+5V	A31	+5V

Pins	Function	Pins	Function
D1	+5V	C1	+5V
D2	+5V	C2	+5V
D3	N. C.	C3	N. C.
D4	N. C.	C4	N. C.
D5	N. C.	C5	N. C.
D6	N. C.	C6	N. C.
D7	ACK64+	C7	REQ64+
D8	N. C.	C8	N. C.
D9	N. C.	C9	N. C.
D10	N. C.	C10	N. C.
D11	N. C.	C11	N. C.
D12	N. C.	C12	N. C.
D13	N. C.	C13	N. C.
D14	GROUND	C14	GROUND
D15	GROUND	C15	GROUND
D16	GROUND	C16	GROUND
D17	GROUND	C17	GROUND
D18	GROUND	C18	GROUND

Pins	Function	Pins	Function
F 1	GROUND	E 1	GROUND
F 2	GROUND	E 2	GROUND
F 3	INTC-	E 3	INTA-
F 4	INTD-	E 4	INTB-
F 5	+5V	E 5	+5V
F 6	N. C.	E 6	N. C.
F 7	+5V	E 7	+5V
F 8	PCICK2	E 8	PCIRST-
F 9	GROUND	E 9	GNT0-
F 1 0	GNT1-	E 1 0	REQ0-
F 1 1	GROUND	E 1 1	GROUND
F 1 2	REQ1-	E 1 2	PCICK1
F 1 3	AD31	E 1 3	GROUND
F 1 4	AD29	E 1 4	AD30
F 1 5	GNT3-	E 1 5	REQ3-
F 1 6	N. C.	E 1 6	N. C.
F 1 7	+3V	E 1 7	+3V
F 1 8	AD27	E 1 8	AD28
F 1 9	AD25	E 1 9	AD26
F 2 0	CBE3-	E 2 0	AD24
F 2 1	AD23	E 2 1	AD22
F 2 2	AD21	E 2 2	AD20
F 2 3	AD19	E 2 3	AD18
F 2 4	GNT2-	E 2 4	REQ2-
F 2 5	N. C.	E 2 5	N. C.
F 2 6	N. C.	E 2 6	N. C.
F 2 7	AD17	E 2 7	AD16
F 2 8	IRDY-	E 2 8	FRAME
F 2 9	DEVSEL-	E 2 9	CBE2-
F 3 0	LOCK-	E 3 0	TRDY-
F 3 1	PERR-	E 3 1	STOP-

Pins	Function	Pins	Function
H1	SERR-	G1	SDONE
H2	AD15	G2	SBO-
H3	AD14	G3	CBE1-
H4	AD12	G4	PAR
H5	GROUND	G5	GROUND
H6	N. C.	G6	N. C.
H7	GROUND	G7	GROUND
H8	AD10	G8	AD13
H9	AD8	G9	AD11
H10	AD7	G10	AD9
H11	AD5	G11	CBE0-
H12	AD3	G12	AD6
H13	AD1	G13	AD4
H14	AD0	G14	AD2
H15	N. C.	G15	N. C.
H16	+5V	G16	+5V
H17	+5V	G17	+5V
H18	GROUND	G18	GROUND
H19	GROUND	G19	GROUND

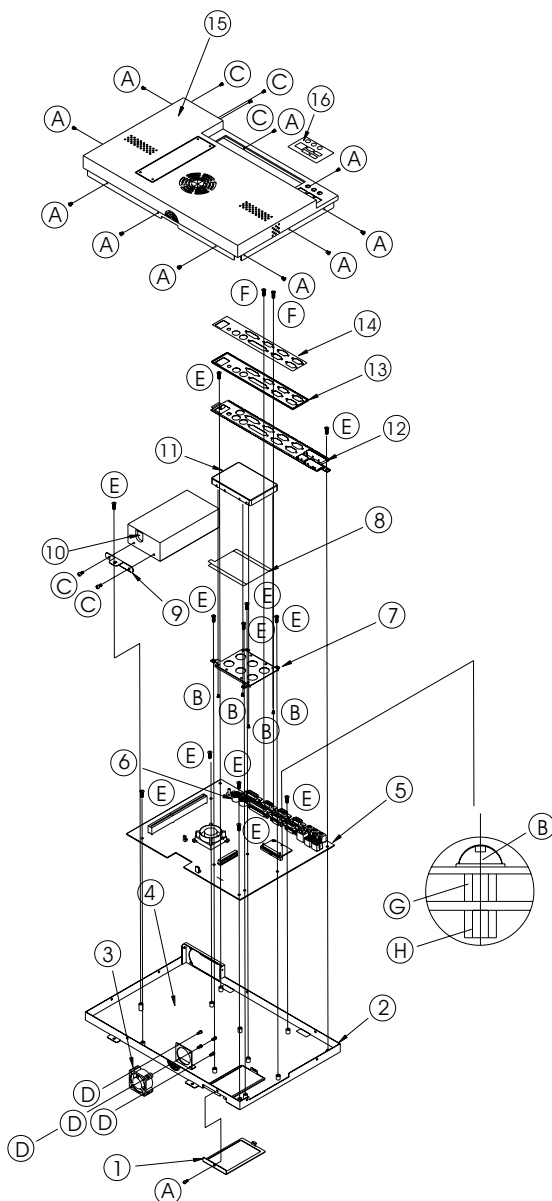
Chapter 13

Exploded View

Computer Module
LCD Display Module

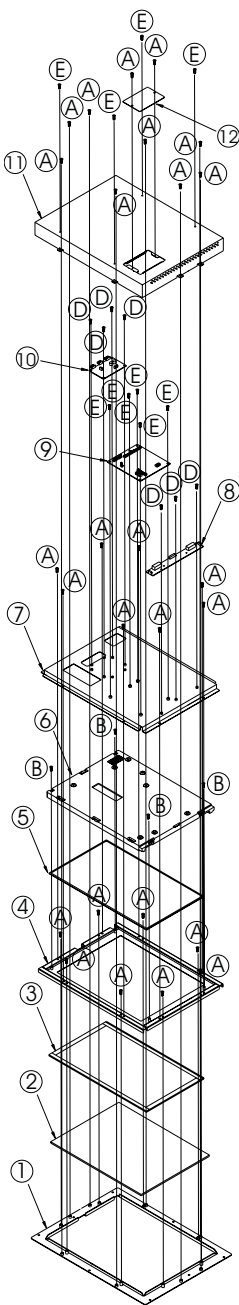
Chapter 13 - Exploded View

13.1 Computer Module



A	M3x5L screws
B	M3x6L with spring screws (for HDD)
C	P6x3/16" screws (for power supply)
D	M5x6Px10L screws (for fan)
E	M4x6L with spring screws
F	4 #11.8 screws
G	3x13M (5Cx7) screws
H	M3.0x0.5x6.0 screws

13.2 LCD Display Module



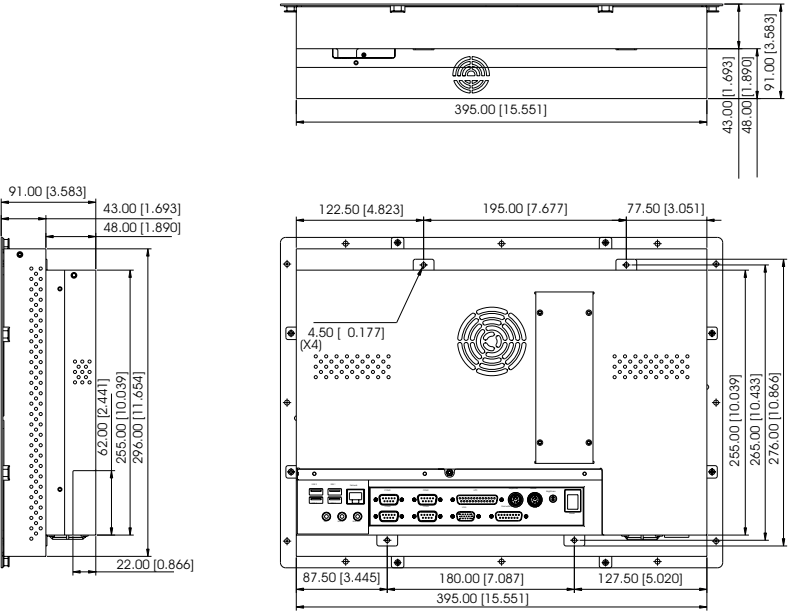
1	15.1" (LG) LCD box frame
2	Touchscreen
3	3M adhesive tape
4	15.1" (LG) LCD box base
5	Dust proof adhesive tape
6	Panel
7	15.1" (LG) LCD control board's holder
8	Inverter
9	LCD's PCB
10	Touchscreen's control board
11	15.1" (LG) LCD box's bottom cover
12	Cover for accessing the Touchscreen's control board
A	M3x5L screws
B	M3x6L with spring screws
C	M3x9L with spring screws
D	M3x5L with spring screws
E	M4x6L with spring screws

Chapter 14

Panel PC Dimensions

Front View
Rear View

14.2 Rear View



Unit: Millimeter [Inch]